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VISUAL EDUCATION NUMBER

F. DEAN MCCLUSKY PH. D., EDITOR
DIRECTOR OF SCARBOROUGH SCHOOL

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EDUCATION

Vol. LV OCTOBER, 1934 No. 2

BASIC VALUES IN VISUAL-SENSORY INSTRUCTION

F. DEAN MCCLUSKY
SCARBOROUGH SCHOOL

F. Dean McClusky, Ph. D., Editor of this Visual Education number, is the Director of the Scarborough School, Scarborough, New York. He was formerly President of the National Academy of Visual Instruction, and is Editor of the School Department of the "Educational Screen." He is the author of "Visual Instruction: Its Value and Its Needs," a report on the present status of visual education, made at the request of Will H. Hays, the President of the Motion Picture Producers and Distributors of America.

IN a technical sense visual-sensory education is the term applied to a large variety of teaching materials, such as moving pictures, the radio, stereoptican slides, talking-film slides, exhibits, et cetera, which function through the sense organs. The main distinction between visual-sensory instruction and other instruction is a matter of emphasis. Visual-sensory instruction emphasizes the value of concrete imagery in the learning process, whereas "other instruction" stresses the importance of verbal imagery. Visual-sensory education should not be thought of as a *method* of instruction, for the materials used in visual-sensory education are valuable only as they aid the instructional process.

The main justification for discussing visual-sensory aids to instruction apart from general devices is the fact that there has developed, rightly enough, a strong movement in schools to centralize visual-sensory materials as they have become increasingly common through the rapid growth of photography and sound reproduction. This movement toward centralization was furthered by: (1) the development of elaborate educational departments in museums, such as the Commercial Museum of Philadelphia, the American Museum of Natural History in New York, and the Field Museum of Chicago; (2) the establishment of school museums, such as those in St. Louis, Reading, and Cleveland; (3) the development of visual instruction extension service in state universities, as at the University of Wisconsin; (4) the growth of city school bureaus of visual instruction, for example in Newark, Chicago, Los Angeles, and New York; (5) the use of the radio in educational institutions; and (6) the organization of companies to manufacture and distribute materials and equipment for visual-sensory education.

A second reason for a separate discussion is found in the fact that in general or special methods textbooks in education, little attention has been given to the use of visual-sensory ma-

terials. Finally, a critical analysis and evaluation of the situation is needed before mistakes are made which will detract from the advantages of using these devices.

Inasmuch as the main distinction between visual-sensory instruction and "other instruction" is a matter of emphasis, the former emphasizing the value of concrete imagery in learning, the latter stressing the importance of verbal imagery, one will recognize that basically both concrete imagery and verbal imagery supplement each other in the instructional process.

From this point of view visual-sensory materials are valuable aids to the successful teaching of practically every subject, because they furnish the concrete elements necessary for a complete understanding of the subject-matter in the curriculum, whether it be in the primary school, secondary school, or college. The use of the concrete and realistic have been prominent in the educational systems developed by great educators in the past. The modern twentieth century idea propounded by Dewey of making the school more than a preparation for life by actual living has again brought visual-sensory instruction into prominence. Inasmuch as more books are used in American schools today than ever before, visual-sensory instruction will serve as a safeguard against verbalism.

The gap between verbalism and doing has been the will-o-the-wisp of educators for centuries. A child may be taught with relative ease to recite the rules of good behavior, but to teach a child to behave in accordance with these rules is most difficult. Some critics of education noting this say that teachers devote too much time to books and not enough to children. These critics consider verbal information to be of little value if one's behavior is out of step with the mores of the community. They argue that too much book learning or education is a positive handicap.

The hiatus between theory and practice may in part be attributed to confusion among educators over the objectives of an education. To some a learned man is one who converses and writes glibly about man's accumulated knowledge. To others an individual is considered "intelligent" or "educated" only if his actions result in satisfactory human experiences. Some teachers argue that the main purpose of the school is to impart information. Others declare that character development is the most important task of the educator and that an informed misfit is more harmful to society than one kept in ignorance.

Another explanation of the failure of informed individuals to behave in accordance with their knowledge is man's great difficulty in translating purely verbal ideas into action. In western civilization no book has received greater attention than has the Bible. For centuries the Christian nations have been taught the doctrine of the *brotherhood of man,* and to *love one's neighbor,* yet these same nations staged in 1914-1919 the most colossal war in human history. It would appear that these Christian teachings are as yet little more than nice-sounding phrases. A few months ago there came to my attention the following true story which illustrates further man's difficulty in acting in accordance with his verbal information. Two

university professors, neighbors, each with young children, were warned through the press and by friends of an epidemic of rabies among dogs. Each family owned a pet dog and the families discussed openly the desirability of having each dog inoculated. The cost of inoculation by the county veterinarian was only two dollars. The children, three in number, played with the pets daily. But the professors did not act, and one dog developed rabies. All three children were exposed to the dread disease and had to be subjected to the ordeal of the Pasteur treatment at a cost of over one hundred dollars to the two families, plus much anxiety and worry over the outcome. All of which could have been easily avoided had the two professors acted upon the information which they possessed.

Not only do individuals find it hard to bridge the gap between word patterns and action, but today they are beset with so many verbalisms of a conflicting nature that a state of confusion and complete stagnation seems to have taken possession of their faculty for intelligent behavior. It is generally recognized that we have been living a fast pace in industry, society, science, and business, but it is not so clear that we have been on a *language spree* as well.

In the relatively infinitesimal time of one hundred years western civilization has amassed a vast amount of so-called knowledge. Our printing-presses work day and night to turn out pamphlets, monographs and books. According to the 1934 World Almanac there were over 4,300 new books, 11 a day, printed in the United States in 1932 in the fields of religion, sociology, economics, biography, history, science, medicine, hygiene, philosophy, education, geography, travel, technical subjects, philology, business, law, domestic economy, agriculture and gardening. So rapidly have experts in the science, industries and social studies been developing their specialities that to read and comprehend an advanced treatise in any of these fields requires an understanding of technical terms not to be found even in the new dictionaries. Fear is based on ignorance. Today we fear the expert because we do not understand his language. This fear is a distinct obstacle to progress, because we should look to our experts for intelligent leadership.

Educators in America have been working upon the assumption that through popular education the masses could be educated to a point which would enable them to intelligently participate in a democracy. It is obvious that the production of verbal ideas has gone forward at such a merry pace that the mass education process must of necessity be lagging further and further behind the pace-setters. Some means must be developed to clarify the language of our experts, faith must be reestablished in our leaders, and schools must devise a way to translate verbal patterns into intelligent human behavior. We need more directness of speech, more parables, more word pictures, more actual pictures, more visualization, more of real living in teaching.

The thesis of this article, therefore, is that teachers should talk less about "education for life" and other high-sounding verbalisms, and proceed to introduce concrete experiences of every sort into the instructional process, so

as to make word patterns dynamic. School boards should spend as much for visual-sensory materials as they do for books. Every large-scale experimental comparison of visual-sensory instruction with verbal forms of instruction has shown an advantage for visual instruction. The Payne Fund studies demonstrate clearly the dynamic power of the motion picture as an educative medium. To see, to hear, to smell, to touch, to taste is the essence of life. Words merely describe it. Teachers who depend solely upon books are failing the child and are misusing the books as well. The modern classroom should be as fully equipped with the materials of visual-sensory instruction as it is with text-books. Both are essential.

The use of visual-sensory instruction may be traced back through the early educational history of mankind. In primitive times boys were taught to hunt and to fish and girls to cook through imitation, observation and participation, plus the necessary language explanation. Early records were picture records. Cave men drew pictures to warn and to inform. The Greeks utilized the school journey, the sand as a blackboard, and real objects or things in their instructional processes. Whereas schools of the remote past used visual-sensory materials, the invention of books and later of the printing press resulted in the introduction of a large proportion of verbal material into the instructional process in the form of text-books. By 1657 A. D. the danger of verbalism was so apparent that Johann Amos Comenius, the great German philosopher and educator, called attention to it by publishing a text-book illustrated with pictures. His *Orbus Sensualium Pictus* was a direct attack upon meaningless word instruction and was a forerunner of the Rousseau "back to nature" philosophy.

The printing of words became so relatively inexpensive that despite the warnings of Comenius, Rousseau, Pestalozzi, and many others, mass education became increasingly more text-bookish. However, in the last few decades science and invention have opened vast new possibilities in the development of concrete materials for teaching purposes.

The development of the photograph and of photo-engraving have made possible the illustration of magazines, newspapers, books and school texts on a scale undreamed of, heretofore. The microscope and telescope have revealed the existence of worlds that were unknown a short time ago. Stereographs and stereoscopes have brought the illusion of three dimensions to the classroom. The motion picture, with and without sound, the radio and the phonograph have become major forces in modern life for the dissemination of information, knowledge and ideas.

The introduction of visual-sensory materials into modern schools on a broad scale has enabled teachers to learn something of their use and value through experience. Some of the more general notions which have been developed as a result of actual experience are:

A. That visual-sensory aids are most effective when closely correlated with the course of study or curriculum.

B. That visual-sensory materials will not supplant the text-book or teacher, but will supplement and increase the effectiveness of the teacher

and text. Hence the term, "visual-sensory aids."

C. That the most effective visual lesson is one that is treated as any good lesson should be handled. The mere exposure of children to visual-sensory materials will not by some mysterious process teach them. Teachers must prepare for the visual lesson in advance.

1. Organized units of visual-sensory materials are desirable.
2. Teachers should be familiar with visual-sensory aids before presenting them.
3. Pupils must be held responsible for material presented.

D. That the organization and administration of visual-sensory materials should, if possible, be such that they are available at the precise moment when the teacher wants them.

E. That the inherent nature of visual-sensory aids, namely, their concreteness, is such that they should be excellent in quality and accurate in detail. Misinformation obtained through a visual-sensory aid is inexcusable.

F. That a few pat illustrations are better than a score of more or less related ones. For example, the intensive study of a few excellent slides and stereographs is in most instances better than a succession of somewhat related pictures.

G. That visual-sensory aids should make accessible in the classroom that which is inaccessible. Visual-sensory aids are valuable also in recreating in the classroom familiar subject-matter.

H. No one type or class of visual-sensory aid should be used to the exclusion of others. Each has its own value and use.

1. The stereograph has been found to be valuable as an individual study experience.
2. The stereopticon slide forms an excellent basis for the socialized recitation.
3. The motion picture is an effective summarization device.
4. The chart, graph and diagram are effective in presenting abstractions, in assisting analysis, and in stimulating the imagination.

I. Many of the general aspects of learning, such as accuracy of observation, analysis, synthesis, generalization, and differences in rate of learning, may be effectively provided for if the teacher makes wise use of visual-sensory materials.

1. Accuracy of observation: Mere exposure of children to pictures or scenes is not enough.
2. Analysis: Line drawings, charts, graphs and diagrams help children in making analyses of concrete experiences. Children should be taught to practice the analytic method also as applied to scenes and photographs.
3. Synthesis: Here again, the diagram and panoramic photograph or chart serve to illustrate the use of visual methods to summarize experiences. The motion picture is particularly adapted to this function of summarization.
4. Generalization: Judd has pointed out the importance of general-

ization as an aim of instruction. Edith Parker's method of teaching geography with pictures is an example of the application of this notion to actual classroom procedure. Visual-sensory aids form the basis of her procedure. (See: Judd's *Psychology of Secondary Education.* 1927. Ginn and Company, page 156, Chapter X, and pages 418-421; and Edith Parker, *A Fourth Grade Geography Unit,* Elementary School Journal, October, 1922.)

5. Difference in capacity: There is a notion, substantiated in part by experience and by some research, that the generous use of visual-sensory aids tends to reduce the number of school failures. Brighter pupils seem to excel in abstractions which have to be made concrete for the slower. Visual-sensory aids are helpful in making these abstractions concrete.

J. There is a danger of "soft pedagogy" and of suppressing the development of imagination if visual-sensory materials are unwisely used. Children must be encouraged to take an active mental attitude toward visual lessons. The child's activity must go beyond mere entertainment and "looking." He must develop a study attitude toward visual-sensory aids. Slides, stereographs, models, charts, photographs, etc., are more easily "studied" than are motion pictures. This fact limits the usefulness of the motion picture unless it can be shown as many times as is necessary. Books have a big advantage over motion pictures in developing the study attitude because of the ease with which they can be "reread."

The foregoing notions of basic values in visual-sensory instruction are in need of much refinement. The new techniques of presentation are on the whole still matters of the future. The field is wide open and the opportunity is great. Business and advertising have been quick to seize upon and to utilize the visual-sensory approach in selling. The school will not be able to hold off much longer the inevitable impact of these vitalizing influences upon basic instructional procedures.

THE INTERNATIONAL CONGRESS OF EDUCATIONAL CINEMATOGRAPHY

CLINE M. KOON
THE UNITED STATES BUREAU OF EDUCATION

Cline M. Koon, Ph. D., is Senior Specialist in Radio and Visual Education in The United States Department of the Interior, Office of Education. He was an official delegate of the United States Government at the International Institute of Educational Cinematography, held in Rome, Italy, from April 19 to 25, 1934. The University of Chicago Press has just published a monograph by Dr. Koon entitled, "Motion Pictures in Education in the United States."

MORE than 700 delegates from 45 nations attended an international congress in Rome, Italy, April 19 to 25, which was called by the International Institute of Educational Cinematography to consider the educational aspects of the motion picture. Representatives of various governments, corporate bodies, associations, and international groups participated. The congress was opened at the Capitol in full state by Premier Benito Mussolini and M. Avenol Secretary General of the League of Nations. General sessions, sectional conferences, committee meetings, film exhibitions, tours, receptions and dinners were held, and resolutions adopted.

The United States was represented by an official delegation of seven members and three representatives of voluntary associations. The increasing importance that the Federal Government is attaching to the motion picture as an educational-cultural medium is indicated by the fact that this is the first time in history that the U. S. Government has been officially represented at such a conference. A list of the names and positions of the official delegates follows:

Dr. Cline M. Koon, Chairman, Senior Specialist in Radio and Visual Education, Office of Education, United States Department of the Interior.

Dr. W. W. Charters, Director, Bureau of Educational Research, The Ohio State University.

Dr. C. F. Hoban, Director, State Museum and Visual Education, Pennsylvania State Department of Public Instruction.

Mr. Chester A. Lindstrom, Associate Chief, Office of Motion Pictures, United States Department of Agriculture.

Mr. Paul B. Mann, Head of the Biology Department, Evander Childs High School, New York City.

Former Governor Carl E. Milliken, Secretary, Motion Picture Producers and Distributors of America, Inc.

Col. Frederick M. Devereux, Vice-President, Erpi Picture Consultants, was appointed an official delegate, but did not go. At his request, however, Dr. Paul R. Mort, Director, School of Education, Teachers College, Columbia University, represented him at a few sessions of the Congress.

Mrs. Philip A. Brennan represented the International Federation of Catholic Alumnae; Miss Dorothy Vernon, the University of Hawaii; and Miss Mary G. Hawks, the International Union of Women's Catholic Leagues.

For working purposes, the Congress was divided into three sections. The first section was subdivided into four working committees; the second section into five committees, and the third section worked as a unit. The following is a list of the sections and committees:

1. First Section: Cinema in Formal Education.
   (1) Visual instruction methodology and the psychology of children.
   (2) The cinema in school visual instruction.
   (3) The cinema and technical and professional life.
   (4) The cinema and the agricultural life.

2. Second Section: Cinema in General Education.
   (1) Films on hygienic topics and social providence.
   (2) The cinema and the adult education of the people.
   (3) Social providence and saving.
   (4) The State and the cinema.
   (5) Technical problems in connection with the national and international diffusion of instructional and educational films.

3. Third Section: Cinema in the life of the Peoples.

Each committee held a series of meetings, heard addresses, had discussions, and prepared resolutions to be submitted to a central coördinating group and then to the general session of the Congress.

The Congress examined the present position of the cinema in connection with teaching and education and suggested the future policy for the motion picture in these fields. Among the major questions discussed were the following:

1. The production, circulation and use of films intended to lead to a better understanding among nations. The desirability of the historic, scientific, and general documentary truth of such films; the value of news-reels; the construction of film archives or museums; the different effect and value of films on peoples of different race, mentality and culture, were some of the specific topics given consideration.

2. The international exchange of information about the availability of educational films and ways of using them in formal instruction and cultural recreation. The International Institute of Educational Cinematography was encouraged to compile an international catalogue of educational films, and in countries where such do not exist, to form national committees to coöperate with the International Institute in the collection and dissemination of information regarding the use of motion pictures in education through *The International Review of Educational Cinematography* and special publications.

3. The influence of motion pictures on the ideals and habits of children and youth. The subjects of censorship, special films for young people, teaching motion picture appreciation, and block booking were discussed in this connection.

4. The production and use of films in various subject-matter fields and for specific purposes. Health and safety, agriculture, thrift, history, science and professions, were some of the subjects recommended for consideration in the production of instructional films.

The American delegation was active throughout the sessions of the Congress. Dr. W. W. Charters, as Vice-President of the Congress, was active in shaping the policies and executing the plans of the Congress. Doctor Hoban and Mr. Mann participated in the visual instruction section and made valuable contributions to the resolutions dealing with the school use of motion pictures. Mr. C. A. Lindstrom took part in the work of the committee dealing with the cinema in agricultural life and arranged the exhibition of the American films. Dr. Carl E. Milliken assembled and delivered the American films to the Congress, participated in the work of the committees most interested in the influence of motion pictures and the international exchange of films. The chairman of the American delegation compiled the preliminary report from the United States, spoke at the opening and closing sessions of the Congress, and served as a member of the central coördinating group.

One of the most interesting features in the film demonstrations was Dr. George F. Zook's newsreel address, prepared especially for the Congress. After pointing out the importance of the motion picture theater as a center of entertainment, Doctor Zook discussed the lasting influence the photoplay is exerting on our attitudes and ideals, and stressed the deep responsibility of educators to coöperate with motion picture producers so that right ideas and proper situations, through countless reiterations, may be set up as a proper standard of life. He expressed confidence that the near future will see a much wider use of instructional films in formal education and urged national planning. In conclusion, he said:

"... If our recent depression with its consequent unemployment has taught us anything, it is that education must be a continuing process. We must so prepare the human products of our schools that they can adapt themselves to changing industrial and social situations. I predict that the near future will see adult education, with its different ramifications, recognized in a great variety of ways that are not realized today. If so, because of its inherent qualities, the film will find an ever-expanding field of usefulness. Therefore, I am anxious to hasten the day when we may put this remarkable instrumentality of celluloid and cogs to work for education in its widest sense."

Prior to the convening of the Congress the various nations and voluntary associations that were invited to participate were asked to submit motion picture reports. About 240 reports were submitted. These reports, which were available at the Congress, are being edited and, together with the resolutions adopted, will be printed as two large volumes by the International Educational Cinematographic Institute, 1A, Via Lazzaro Spallanzani, Rome, Italy. The report from the United States was compiled in the Federal Office of Education. It has been published as a book by The University of Chicago Press.

The work of the Congress was summarized in a series of resolutions. In main, these resolutions (1) express confidence in the potential usefulness of films for educational-cultural purposes, stressing their applicability in various subject-matter fields and for specific purposes; (2) point out the present power of films as a social force which should be used in national well-being and international understand-

ing; and (3) encourage the international exchange of educational films and information intended to facilitate the utilization of films in education.

As reflected in the following resolutions, the Congress gave considerable consideration to the use of the school film:

(1) That the film should be considered as a didactic auxiliary of the greatest importance, to be used for all subjects for which it is suited, taking into account the particular character of each subject and the degree of development of the pupils.

(2) That no subject of whatever nature need be excluded *a priori* from projection, either by slides or motion pictures; but that if the film is ordinarily used for scientific teaching according to the nature of the subjects, it should be used with great care.

As to the methods to be used for school films, the Congress states:

(1) That the use of the cinema should not interfere with the educational influence of the teacher, nor with the effect of his words. It is he who should put the questions, explain, comment, inspire and direct the activity and the response of the pupils.

(2) That, consequently, the teaching film should not be sound or talking, but a silent film in which the commentary is made by the teacher, except where the sound or talking film may usefully complete and strengthen the visual impression.

(3) That the use of the film should not induce a passive absorption of rapidly succeeding scenes, but that it should be used to stimulate the activity of the child in every kind of scholastic work.

(4) That during the projection of the school film the teacher should have the opportunity of intervening, in order to illustrate points which require special explanation, and that he should take into account the fact that lantern slides are often very useful, either by themselves or together with motion pictures.

(5) That the subjects to be used for school films should be part of an organized didactic plan, which has been previously studied by pedagogues and approved by the school authorities in accordance with the school curriculum and which may be modified according to new possibilities which the use of the film presents.

As to the question of organization, the Congress states:

(1) That school films should always be made from a didactic point of view and with the close coöperation of the teacher.

(2) That all teachers, either elementary or secondary, should be trained, technically, psychologically and didactically, in teachers colleges or by special courses, in the use of the projection equipment and of the school film.

(3) That every effort should be made in order that every class have its projecting apparatus, and every secondary and elementary school, or at least every school centre, the necessary material, either for motion pictures or for lantern slides.

As to collaboration between teachers and technicians for the production of educational films, the Congress states:

(1) In order to answer the purpose an educational film must be perfect from a pedagogical as well as from a technical point of view.

(2) These films should be produced

with the collaboration of the teacher, of the technician, and the expert in the subject treated.

(3) The expert will have to answer for the exactitude of the subject, the teacher for the suitability of the film for school use, and the technician will have to see that the film be produced in such way as to fill the requirements of both the expert and the teacher.

At the time the Congress was held, twenty-five nations had signed the Geneva Convention to facilitate the international exchange of educational films by admitting them free of import duties. It appears that the international exchange of educational films will materially increase as films find a wider application in education. Therefore, from a business viewpoint, it is fortunate that the United States participated in this Congress. From an educational viewpoint, it is even more fortunate. The United States can profit immeasurably from the experiences of other countries in the production, distribution and use of educational films.

VISUAL-SENSORY AIDS IN EDUCATION

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VISUAL education has become universally recognized as fundamental in education. School officials, research workers in educational psychology and philosophy, and educational organizations and associations are scientifically evaluating the use of visual and other sensory aids in the learning process. A historical sketch of visual-sensory aids in education and a description of its various phases provide interesting and instructive reading. This article proposes to present, first, a general survey of the scope of visual-sensory aids, and, second, two examples of specific types of visual-sensory aids.

Meaning of Visual Education

Visual education, like other phases of school materials and subjects, has arrived at its present status through an evolutionary process. Scientific research has rather definitely determined both the subject-matter and the methods employed. With the realization that sensory experiences form the basis of all intellectual activity has come the conviction that visual-sensory aids must continue to remain an integral part of the educational systems of the world.

In its initial stages visual education was construed to refer to projected pictures upon an illuminated screen. In the minds of many people visual education and lantern slides and motion pictures were identical terms. This misconception is still prevalent in the thinking of many people, even including many educators. This article is designed to help eradicate this misconception. Inasmuch as all sens-

ory experiences may function in the development of the correct concept, the term *visual-sensory aids* is becoming quite generally accepted by educators and rapidly supplanting the term *visual education* or *visual instruction*. Current literature uses the expressions interchangeably.

Visual-sensory aids is not a separate subject, nor is it even a new method of instruction. Educators interpret the term to represent a grouping of materials and devices and an organized department of instruction which is not based upon subject-matter but upon a method of presentation. It is vital to all instruction and indispensable to effective learning in every subject of the school curriculum, involving, as it does, the use of all types of visual-sensory aids. The natural implication is the enrichment of learning through all sensory experiences.

Types of Visual-Sensory Aids

Scientific research has determined that visual perception predominates in sensory experiences. But the visual is so interlaced with the other senses that few psychologists would try to separate one from the other or attempt to state definitely the contribution of each, separately, in a given learning situation.

Increased interest in visual-sensory aids has brought to the fore all the possible types of aids for critical examination. Careful studies of each aid have shown that a broad classification reduces the various types to five major groups. This simplified classification of the various types of visual-sensory aids results in the following important groupings: Apparatus and Equipment, School Journey, Objects-Specimens-Models, Pictorial Materials, and Miscellaneous.

Apparatus and Equipment includes such things as the motion picture projectors and still projectors, with the accompanying materials; laboratory equipment, the blackboard, microscopes, bulletin boards, etc.

The School Journey is designed to provide complete sensory experiences relative to such phenomena as cannot be brought into the schoolroom. It should become a regular school exercise purposefully pursued.

The Object-Specimen-Model type is extremely valuable because of the direct contact and acquaintanceship with the things themselves. Children are allowed to see, handle, examine and test the materials personally.

Pictorial Materials give a photographic image or likeness of the object itself, thus presenting correct images for intellectual consideration. Because of the wide use of pictorial materials, the whole world can be placed before the child in the classroom.

For general classification and simplification the *miscellaneous* type may be used to include a number of things, such as the sand table, pageants, diagrams, etc.

Visual-Education Departments in Cities, Colleges, Universities, Museums

In an attempt to make instruction meaningful, effect an economy in time, sustain interest in school work, and develop correct concepts, individual teachers, school administrators, and boards of education began collecting visual-sensory materials for classroom use. From such efforts departments

of visual education were developed by cities, colleges, universities, and museums, until today practically every city of any considerable size has its department of visual-sensory aids with a well qualified staff to administer the materials. Likewise colleges, universities, and museums have instituted visual education departments and visual-sensory aids service. Some states and certain departments of the national government also have their visual-sensory divisions and aids.

In many places the visual-sensory materials provided consist quite largely of lantern slides and equipment and motion picture materials. However, many of the institutions have kept pace with the developments in the field of visual sensory aids and have provided not only projection materials but also exhibits, pictures, habitat groups, books, charts, and practically every type of visual-sensory aid. Credit for the progress in visual-sensory aids can quite largely be attributed to the successful practices developed in the schoolrooms under normal classroom situations.

National Organizations Formed

In the beginning the visual education pioneers were widely scattered throughout the country. Following the lead of other educators affiliated with the National Education Association, the feeling developed among visual education workers that a national visual education organization should be formed. Actually, two associations were formed; one was the National Academy of Visual Instruction; the other was the Department of Visual Instruction of the National Education Association, formed at the Oakland-San Francisco Convention of the National Education Association, July, 1923.

The two organizations worked along parallel lines from 1923 to 1932. At the thirteenth annual meeting of the National Academy of Visual Instruction, held in Washington, D. C., February, 1932, the two associations merged into one organization known as the Department of Visual Instruction of the National Education Association.

Membership in the organization is open to anyone who is interested in the use of visual-sensory aids to instruction in the classroom, industrial organizations, church groups, and other non-theatrical groups. The annual membership fee is $2.00; this fee includes the publications of the Department as well as a year's subscription to the *Educational Screen,* the only magazine devoted exclusively to visual-sensory instruction. The roster of membership of the Department contains the names of many nationally-known educators, administrators, research workers, and successful classroom teachers, who have affiliated with the organization for mutual benefit.

Two meetings are held annually, one concurrently with the Department of Superintendents, the other at the time of the annual meeting of the National Education Association. The latter meeting includes the annual business meeting, with the election of officers for the ensuing year. The winter meeting is usually devoted to a consideration of administrative problems together with reports of research progress. The summer meeting is designed to be of especial assistance to the classroom teacher.

Visual Education Courses for Teacher Training

The successful use of visual-sensory aids in the classroom requires special training on the part of the teacher. Not only must the teacher know the psychology and philosophy of education, but in addition he must know the specific contribution each visual-sensory aid makes in the learning process. Scientific experiments are being conducted continuously to determine the place and value of each of the various visual-sensory aids. The national visual organizations have been especially active in encouraging such research, with careful testing in the classroom.

At the Los Angeles meeting of the National Education Association, July, 1930, the Department of Visual Instruction passed the following resolution pertaining to teacher training institutions:

Resolved: That the Department of Visual Instruction of the National Education Association earnestly recommend that a course in visual and other sensory aids in teaching be required of all persons preparing for the profession of teaching and that teacher training institutions in every state be required to organize and offer such courses beginning with the scholastic year 1932-1933.

A committee was appointed from the Department to study the problem of teacher training and to develop a proposed core course for teacher training institutions. The committee report submitted to and accepted by the Department of Visual Instruction at the Atlantic City meeting in 1932, as a core course for visual-sensory aids in teacher training institutions, included the following items:

Visual-Sensory Aids in Education (Core Course)

Research—Summary of research investigations in visual instruction.

Historical Background.

Psychological Aspects and Verbalism.

Projectors and Projection Techniques—Still and motion projectors; housing, care techniques.

The School Journey—Organizing, conducting, checking results.

Museum Procedure.

Pictorial Materials—Standards for evaluating, mounting and filing; housing and care of stereographs; mending films and film-strips; housing and care of slides and films; techniques for all.

Objects-Specimens-Models—Assembling, housing, care, sources.

Photography—Still and motion picture techniques; development of films and making prints, making blueprints; standards and sources.

Blackboard and Bulletin Board Techniques.

Administering and Budgeting Visual-Sensory Materials.

Radio-Vision—Apparatus, procedures, programs.

Apparatus and Equipment.

Miscellaneous.

Bibliography.

Within the year following the report, a number of universities, normal schools, arts colleges, and teachers colleges included in their offering of subjects a visual-sensory aids course. In Pennsylvania a laboratory course in visual-sensory aids is a prerequisite to obtaining a certificate to teach in the public schools of the Commonwealth. Other states are seriously considering such action.

Current Developments

The five major classes of visual-sensory aids have been subjected to many innovations, expansions and developments from time to time. The current developments are mostly in the fields of sound motion pictures, radio, and photo-play appreciation. Nation-wide research studies have been conducted in each of these fields by leading educators with funds furnished by philanthropic organizations, industrial groups, and commercial concerns. These studies have revealed definite materials and techniques which contribute immensely to effective teaching and learning.

National organizations have been formed by those interested in such work. The Department of Visual Instruction has formed committees to assist such groups. Likewise the national government, through the Office of Education, has given assistance and conducted a number of research studies of its own initiation.

In the field of radio in education, the National Advisory Council on Radio in Education, The National Committee on Education by Radio, and the Institute for Education by Radio are devoted to the work on a nation-wide scale. The State schools of the air and the schools of the air of the commercial national network organizations have been especially active in efforts to determine the place of radio in education and to produce programs for schoolroom use.

Series of sound motion pictures have been produced for classroom use under the direction of leading universities through the coöperation of motion picture producers and distributors. These have been made along sound pedagogical lines with professional photographers and commercial sound technicians. Such films are of high quality physically and have been widely distributed for school use.

Posters and Booklets

Both the poster and the booklet can be made effective teaching tools, provided the teacher is skilled in sensing the appropriate place and time to use them to achieve specific problem-solving results. In addition, the teacher must know the techniques of construction and the standards by which the results will be judged. There is the possibility of the use of the poster or the booklet in every school subject and in nearly every project undertaken. However, some units lend themselves more readily to one teaching aid than the other.

There are a number of specific outcomes to be derived from making a poster and the construction of the booklet. Both provide splendid opportunities for correlating the work in one subject with that of another. In constructing a poster or a booklet in health, or science, or geography, those art principles and English fundamentals learned elsewhere must be stressed and practiced. Each finished product must show a thorough understanding of the project under consideration, plus the mastery of certain fundamental principles, habits, abilities and skills.

In the poster the major idea is epitomized and vividly portrayed. The idea must be so arranged that it will be sold at one glance. This calls for creative work on the part of the child; hence, fundamental principles must be mastered and then expressed in a terse, forceful manner. Accuracy,

neatness, cleverness and mastery stand permanently portrayed in the finished product—the poster. High standards of excellency should be the goal towards which each pupil should strive.

The outline which follows, entitled *Poster Making,* contains a list of directions for making posters, together with some suggestions concerning the use of posters. If the teachers and pupils have these standards clearly in mind before the construction work is started, the finished product will be more satisfactory and effective.

Poster Making

Posters are used to sell an idea, a commodity, or a thing.

Posters differ from an *illustration* or a *cartoon* in that, whereas they are meant to be looked at at close range in a book, paper or magazine, the poster must be seen in its entirety, from a distance and at one glance.

It is evident that if a poster is to sell its commodity, it first must be read. Hence we say that a good poster must:

a. First attract attention.
b. Attract attention suddenly.
c. Have its reading matter concentrated and understandable.

Posters can attract attention:

A. By a snappy slogan or caption: "Stop, Look, Listen."

If when the poster is finished the questions, how, when, where, or by whom, can be asked, it is not complete and will not sell the idea. With the slogan, "Drink Milk," the questions, why, when, and by whom, can be asked, indicating that the work is not complete. It in itself is not a good slogan for posters.

B. With suitable colors.
   a. Use strong contrasts..

Black and white are not colors, but they are the strongest contrasts we have.

Yellow and purple, orange and blue, red and green make suitable combinations.

   b. Strong contrasts are gained by using one dull and one bright color. Then black, gray, or white may be used with any color or colors to intensify them.
   c. Colors should be applied flat for poster work.

C. By readable lettering.
   a. Use large, simple easy to read-at-a-glance lettering.
   b. It is not advisable to print the words diagonally, or up and down.

The picture used should fill the space.

a. Arrangement of printing should lead the eye to the picture, or from the picture to the printing.
b. Margins should always be used. Bottom margins should always be the largest.
c. Mounting the picture, or framing it with a heavy line is often very pleasing in its effect.

In selling the idea or thing it is necessary to keep in mind the following:

A. Have a definite plan for solving the problem.
B. Know why you wish to use the poster. Advantages and limitations.
C. Who should see the poster—selecting and classifying the audience.

D. Know where to place the poster. Use in halls, classrooms, stores.

E. What you wish to say in *poster* form.

F. What poster *form* will best express the facts and ideas.

G. How the project will be organized. How to get the posters made.

H. How much time and money may be spent on posters.

I. How you will follow up the results of the poster.

The booklet can be used to bring out principles, develop habits, attitudes and skills. The booklet can be a source of satisfaction, pride and joy. Beautiful booklets can be made by children in all grades of school work. One booklet can tell the teacher many things about the pupil: Does he really understand his problem? Can he select from the mass of materials those significant items which tell the story effectively? Can he organize materials well? Is he neat in his work? Can he use his art, his English, and his mathematics to his advantage? Can he follow directions? Is he creative in his work? Does he pride himself in work well done? Does he strive for accuracy, beauty and high standards of excellency? Are these attitudes, habits and skills reflected in other phases of school work? These and many other questions might arise in the minds of persons viewing the finished booklet. The answers to the questions would be found by a study of the booklet itself.

The construction of the booklet involves a clear understanding of the problem to be solved, the objectives to be obtained, collecting materials, selecting representative specimens, organizing the materials, displaying and presenting them, and binding the materials into the finished volume.

The following outline entitled, *Standards for Making Booklets,* has proved to be a very helpful guide to both students and teachers.

Standards for Making Booklets

A. Standards for Selection of Materials for Booklets.

I. Materials must:

1. Create an atmosphere.
2. Bring out principles.
3. Excite interest.
4. Bring before the pupil definite facts.

II. Pictures must:

1. Show clearly the point desired.
2. Be simple. (Complicated pictures confuse the reader.)
3. Have one object rather than many.
4. Show actual conditions.
5. Be selected to tell a connected story.
6. Colored pictures are preferred in the lower grades.

B. Standards for Organizing the Materials in Booklets.

1. Materials should be arranged in unit sets.
2. There should be a title page descriptive of the unit.
3. Subject matter should not be on the same page as the pictures and other illustrative materials.
4. Pictures and illustrative materials should be mounted on one side of the paper only.

5. A table of contents, a foreword or preface and fly-leaves should be provided.

C. Making the Cover.

1. Title should be simple.
2. Lettering used should be large and plain.
3. Cover should contain:
   a. Title only, or
   b. Title and design,
   c. Title and picture, or
   d. (a), (b), or (c), plus maker's name.

D. Arrangement of Illustrative Materials.

1. A page should contain only a few, well selected pictures or objects.
2. Use simple descriptive titles only. Place titles under picture or materials, or at bottom of the page.
3. Illustrative materials should be placed in logical sequence.
4. Materials should be mounted parallel with the sides of the page upon which they are mounted. (Never diagonally.)

E. Types of Illustrative Materials Suitable for Booklets.

1. P i c t o r i a l materials. (Photographs, prints, ads, pictures, diagrams, graphs, cartoons, maps, blueprints, photostats, cut-outs.)
2. Specimens. (Must be thin and flat.)
3. Newspaper and magazine clippings.

F. Sources of Illustrative Materials. Daily newspapers, rotogravure sections of Sunday papers, trade magazines, popular monthly magazines, picture dealers, steamship companies, railroad companies, chambers of commerce, industrial institutions, travel bureaus, catalogues, photographs, textile samples.

Conclusion

In conclusion, these two examples were deliberately selected to indicate the changed viewpoint concerning visual-sensory aids for school use. Many teachers and so-called visual education workers feel that they cannot carry on a visual-sensory aids program without the projection equipment. The booklet or the poster can be employed in any classroom, under normal conditions, with any age-grade of pupils, at little or no cost; whereas, projection materials necessitate the outlay of considerable money, special room equipment, and trained projectionists.

MECHANICAL AIDS TO EDUCATION AND THE NEW TEACHER—A PROPHECY

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ANTHROPOLOGISTS have long called attention to the influence of the tools of man on his culture. Elaborate confirmation of this observation may be found in the history of education. In fact, it is the thesis of this paper that even in contemporary civilization the extensive development and application of mechanical aids is destined to influence profoundly the techniques of instruction and to produce vital alterations in the role and function of the teacher. A few citations will serve to demonstrate the extent to which educational practice has already been modified by simple teaching devices.

At one time instruction was primarily a matter of oral communication, with the teacher at the sending and the pupil at the receiving end of the process. But the refinement of printing laid the foundation for the development of the text-book, which, in turn, imposed important changes on the pattern of American education. For example, the widespread use of the text-book enabled people to enter the teaching profession with very little specific preparation for their work. It may seem absurd to blame the up-till-recent mediocrity of teacher-training on the innocuous text-book. But as long as the pupils were confined to one book, as long as the teacher could control the assignment and could keep ten pages ahead of the class, why should he engage in years of special preparation for his duties?

The text-book has also been responsible for the abominable 'lesson-learning' habit of study which even today dominates a majority of American pedagogical practices. The take-the-next-ten pages type of assignment and its regurgitation by the class on the following day is an inevitable by-product of the rule of the text-book. And finally, the distaste of many people for reading can be attributed in part to the use of the text-book. For what person leaves the school with a fascination for the printed page, when his only approach to books has been by way of a routine acquisition of leaden facts presented in a tedious prose style? But why labor the point? The text-book has been flayed enough to establish the principle of the dependence of educational process on educational instrument.

But for the past decades new technical aids have been appearing which are already making their impact on instructional practice. For instance, observe the invasion of the classroom by the radio. In Cleveland (in one school building) instruction may be carried on simultaneously in several classrooms by the simple expedient of

a teacher broadcasting from a microphone in the principal's office. In Michigan a class of any elementary or high school may request from the State University a unit of instruction on any topic. In a short time some member of the faculty will broadcast his reply from the University microphone in Ann Arbor and all of the pupils and citizens of the state may listen to a lesson in French, an interpretation of Beethoven's Fifth Symphony, or a discussion of stratospheric explorations.

But more potent than the radio in the classroom is the silent and talking moving picture. In the past fifteen years the research literature relating to the motion picture in education would alone require a formidable bibliography for its enumeration. Courses on the methodology of motion picture instruction are being offered in several centers of higher education. And within the last few years the library of educational films has become so extensive, the distribution and mechanics of exhibitions have been so greatly facilitated that a fair amount of motion picture service is already available for the mass of schools at an expense no greater than the average fee paid by a superintendent of schools for a single commencement address to his graduating class of high school seniors.

It is not the province of this paper to venture a prediction of the exact date which will definitely mark the advent of what might be termed the new technology of education. But the writer opines that just as the railroad, steamboat and automobile have transformed the mode of life in the last century, and just as the extension of electric power and the development of aviation will reshape the life of the coming century, just as certainly will the radio, motion picture, television, sound recording (musical and non-musical), cheap printing, and similar devices transmogrify the cultural life of the masses and the technique of their instruction. The change is inevitable. Its arrival is only a matter of time and ingenuity.

It is not fantastic to prognosticate that instruction in the fine arts will be enriched by the extensive accumulations of inexpensive but precise copies of famous paintings. Libraries of recordings will bring the best musical compositions of all ages to the average schoolroom. The finest orchestras, instrumentalists and vocalists of the world will perform for universal education as even now the New York Symphony and Walter Damrosch broadcast for the American public schools. Talking and silent motion pictures will take over much of the laboratory training in the natural and biological sciences. Film and sound discs will record units of instruction and lectures by experts on every conceivable aspect of the curriculum. Entire courses of study will be outlined in terms of these mechanical aids. Buildings will be equipped with sound-proof audition rooms of various sizes for purposes of individual and group instruction. Talking machines, radio and television receiving apparatus and silent and talking motion picture projectors will be standard equipment in the school of the future, just as desks, blackboards, globes, maps and text-books are common to the school of the present. Inequality of instruction will no longer exist. Every school, from country and vil-

lage to town and city, will have access to lessons planned by master teachers. Once the original recording is made, copies can be produced by the thousands and can be distributed wherever children assemble for instructional purposes.

When this new technology invades the classroom, what will become of the teacher? Will the number of teachers decrease and will those who remain become film librarians, schedule makers for audition rooms, and caretakers of receiving and recording apparatus? Many thoughtful people, pondering the prospect detailed in the preceding paragraph, answer these questions in the affirmative. They predict that the work now done by five teachers may some day, with the aid of mechanical implements, be accomplished by one teacher. And they forecast that technological unemployment will raid the school and divest the teacher of his importance in the educational process.

This apprehensive prophecy is not idle speculation. If many boards of education were adequately informed concernings the techniques and materials already available at low cost, they would certainly seek the aid of mechanical devices as the way out of a difficult financial situation. For example, if $2,000 worth of equipment could supplant the work of several teachers whose combined salaries were $5,000, does anyone doubt that many administrators would consider it a stroke of shrewd management to go technocratic, save the $3,000 for the taxpayers and throw several teachers back on the mercy of a competitive market and the teachers' agencies? In fact, probably the greatest protection the teaching profession has against such exploitation is the ignorance of those engaged in school management concerning the possibilities of mechanical aids in education. If this argument sounds ridiculous, have not the results of recent experiments on the size of classes been urged to defend the recent widespread increases in the number of pupils per class, and have not administrators and boards of education, even in the absence of scientific evidence, thrown teachers out of employment by augmenting the teaching load of those who remain? It is therefore not inconceivable that from the standpoint of a shortsighted and petty economy, the introduction of the new technology in education would compel the elimination of the teacher.

But the writer offers no such pessimistic prophecy. In the first place, more likely than not the application of mechanical aids to the technique of instruction should humanize the task of teaching by liberating the energies of the teacher for the enrichment of his personal and intellectual life. Much of the preparations of a teacher under present circumstances is routine and requires enormous expenditures of uninspiring effort. Much of this preparation will, in the future, be taken over by recording and broadcasting services. The teacher will be exempt from the annual rehash of dead courses of study. The machine will assume the major burden of the presentation of subject matter. This will not mean that the teacher will know less about his subject; nor does it mean that he will become a skilled mechanic. On the contrary, the teacher will be released to cultivate his enthusiasms for values and to re-

new his sense of intellectual adventure.

In the second place, the advent of the new technology in education would thrust the teacher into a role at present associated with the function of the supervisor. He would be a member of the class audience and would become a critic of the technique of the recorded lesson. He could observe, far more objectively than is possible under present circumstances, the effects of the instruction on the pupils. He could repeat a lesson, or select a different one. He would be a maker of programs and would enjoy a detachment which would give him a far greater perspective of the educative process than the teacher can now know, engrossed as he is in the minutiae of class management and presentations.

In the third place, consider for a moment the implications for American life of the pre-school and adult education movements. If the service of these programs is to be more than pious aspiration, and if they are to be extended to the entire population, from what source will the leadership for these enterprises come? Certainly not from the already overworked members of the present elementary and high school staffs. And it is doubtful if society can stand the financial strain of supporting a complete personnel for a comprehensive program of these extensions of educational opportunity. Probably the addition of some new leadership will be essential, but even under favorable circumstances, it is a question whether or not an adequate and inclusive scheme of pre-school and adult education could be undertaken unless some of our present elementary and high school staff could be released from their present occupations and unless the efforts of the new staff could be supplemented by the extensive use of mechanical aids to instruction.

And in the fourth place, the application of the new technology to the service of education would liberate the teacher to become an expert in the adaptation to educational problems of the diagnostic and remedial procedures of clinical psychology. The vast program of mental hygiene leading to the prevention of insanity, delinquency, crime, and social and personal liabilities of all kinds must inevitably become the function of the school. The enormous burden of caring for the institutional and marginal cases of human maladjustment is becoming so enormous that society out of sheer self-protection can no longer be content to confine its handling of the problem merely to institutional commitment. The school is the only public institution that can care for an adequate program of mental hygiene, for it contains all the children of all the people at a period of growth when some control of development is possible.

But where will we secure the leadership for the clinical and remedial task of education? Certainly not in the present school staff. For not only is the teacher untrained to handle the great number of delinquencies, truancies, behavior problems, cases of discipline, emotional difficulties, special disabilities and mental deficiencies of school children, but he does not have the time to handle them, even if he were trained to do so. Nor can an adequate staff, even if it could be afforded, be recruited from the present

supply of experts trained in diagnostic and remedial psychology. For, however skilful the visiting teacher and clinician are, they are not available in sufficient numbers to contribute even a drop in the bucket of the stupendous task of human rehabilitation which is present in the school population.

We cannot therefore depend on either the teaching staff or the present supply of experts for the leadership of the clinical function of the school for reasons inherent in the following figures. It is estimated that in the average American community approximately 20 per cent of the general population are attending a public school. Of this 20 per cent (i. e., the school population) 10 per cent of the children are in need of expert clinical attention. At the same time there are approximately thirty pupils for every teacher in the average school. Let us apply these calculations to a town with a population of 5,000 people. In such a town 1,000 children would be in the public schools. Of these 1,000 children, 100 could profit from the attention of a specialist in diagnostic and remedial work. In this school system there would be approximately 33 teachers. These teachers already have an enormously baffling task in directing the adjustment of the 900 children who possess no more than the usual amount of human frailty and conflict, and certainly they have neither the equipment nor the time to undertake the prodigious task of helping the remaining 100. And the writer uses the word prodigious deliberately. For no one, unless he has carried a case load of problem children involving not only a thorough diagnosis, but also a continuous and adequate program of treatment can appreciate the stupendous expenditure of time, effort and ingenuity required for such a task.

It is hoped that at this point in the discussion, the thesis of this paper is clear. We are at the present time witnessing the refinement of techniques of recording and communication possessing a potential application to procedures of instruction which, when developed, will transform the conduct of education and consequently the role of the teacher. A superficial interpretation of this fact might indicate that such a development would produce a technological unemployment leading to the ultimate elimination of teachers and the mechanization of the educational process.

The introduction of mechanical aids in education would certainly modify instructional practice and the role of the teacher, but there are adequate grounds for venturing a prophecy much different from that suggested by the pessimism of the preceding sentence. The coming pedagogical technology should brighten the teacher's task by eliminating the monotonous features of his present routine and by enabling his individuality to grow in intellectual stature and personal attractiveness. It should encourage him to evaluate much more critically and objectively than he can at the present time the processes of instruction. It should free him to extend his activities into the fields of preschool and adult education, and should liberate him to divert a portion of the stream of human maladjustment which at the present time the school permits

to flow on into adult life virtually unchecked and uncontrolled, with a frightful cost to society in economic loss and personal suffering.

In conclusion, it is the burden of this paper that the introduction of mechanical aids in education will not dehumanize the instructional processes and eliminate the teacher. On the contrary, its advent will be necessary if the teacher is ever to become the superior human being that he ought to be, and necessary if the vision of education as a means for the increase of human happiness and the enrichment of life at all ages, for people of all levels of capacity and all kinds of talent, is ever to be realized.

THE PLACE OF SOUND FILMS IN INSTRUCTION

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THE school has an increasingly heavy responsibility in preparing boys and girls to meet intelligently problems of our highly complex social order. The world of the learner today is vast; new areas of study, new critical issues are constantly appearing. There are countless facts to be assimilated into generalizations, the tools for thinking; there are new controlling appreciations and attitudes to be fostered.

Education must keep pace with these demands. Not only the objectives and materials of instruction, but the techniques and devices of teaching must undergo a continuous process of appraisal and improvement, if the educational system is to be efficient in achieving its purposes. The scientific and technological advances have created new mediums of communication which must be scrutinized for their possible contribution. Every device for bringing reality to the learner and for enlarging the scope of learning should be explored for its possibilities. In the scrutiny of methods and devices for attaining modern objectives of education, it is important to consider the new mediums of communication which have resulted from scientific and technological advances. Among these is the sound motion picture.

Changing Educational Practices Necessitate an Evaluation of All Instructional Devices.

The potential contributions of the sound motion picture to education can be surveyed best in terms of an analysis of recent trends in curricula, methods, and administrative procedures.

Expansion of the Curriculum. During the past century there has been a tremendous increase in the number of new subjects in the school curriculum—a necessary step if education is to keep in step with the rapidly changing conditions of modern life. Even in schools that integrate closely related subjects into comprehensive

courses, the trend is toward more and broader subject matter. There is likewise a tendency toward building broad units around mass concepts rather than teaching mere isolated and unrelated facts.

Gravitation of subject matter downward. For several decades there has been a trend toward shifting subject matter downward in the school curriculum. Certain materials have moved from the college to the secondary school; and materials formerly included in the secondary curriculum have been drawn into the elementary curriculum. The same is occurring from grade to grade on the same school level. This downward movement of curriculum content has resulted from a desire to acquaint students with important concepts as early as possible in their school life. One source of difficulty has been to overcome the young student's immaturity of experience.

Trend from abstraction to reality. Until very recently education has been characterized by verbalism. Since teachers were traditionally poorly trained, the textbook became the chief educative medium. Learning tended to be highly abstract, since the student rarely came in contact with objects or reality. Ability to memorize facts was the criterion of proficiency. Today the trend is to use books (not necessarily textbooks) as references, and as a means of broadening understanding. Learning is made concrete and real by experiencing life situations in the classroom.

New emphasis on administrative economy. The curtailment of school revenues during recent years has focused the attention of school administrators on desirable economies. The criterion has been to preserve, and if possible, to improve, the quality of instruction. One tendency has been toward larger classes in certain subjects, especially those whose outcomes are primarily appreciational.

These trends are significant evidences of the changing conception of education. Under these new conditions the traditional textbook-recitation technique breaks down. The newer mediums of communication are destined to play an increasingly important part in enlarging the scope of the teacher's usefulness.

Mechanical Instructional Devices

Along with the sound film, there are numerous mechanical and physical devices that are accepted as educational aids. These may be roughly classified according to their sensory approach: visual, auditory, and audio-visual. Each of these devices is suitable for portraying certain type materials. It should be noted that the sound-motion picture—a highly complex and flexible instructional device—possesses the fundamental element of all these other mediums.

Visual

Objects and models. Observing the object of study is highly desirable in developing complete understanding. Sometimes it is possible to utilize a model in lieu of the object. However, of all materials studied, there are comparatively few which it is practical or feasible to bring into the classroom. Then, too, the fundamental part or process is not always revealed by observation.

Still projection. The slide, the film slide, and the opaque projector are

excellent devices for presenting still pictures, maps, charts, and drawings. Their primary value is in portraying static representations.

Silent motion pictures. Of the strictly visual mechanical devices, the silent motion picture is the most versatile. Where sound is not required, it is excellent for presenting objects in motion, regardless of speed—a bullet in flight or an opening flower. Obviously, it is uneconomical to portray static objects by means of the motion picture.

Auditory

Phonograph. The phonograph, especially the phonograph with electrical amplification, is an effective medium of instruction for individuals and for groups when the only element required is sound. It is particularly adapted to develop appreciations in music, and oral and aural skills in the languages. Its chief advantages are facility of use and the possibility of indefinite repetition.

Public address system. The simplest public address system is the amplification system used in auditoriums. This is very desirable when children are performing on the stage. There may also be a public address system from the central office to the individual classrooms, for announcements and recorded programs. The same system may be used for radio programs. It may be thought of as a combination phonograph, radio, and local (in the building) radio.

Radio. The radio is especially well suited for presenting programs in music appreciation and the speeches of outstanding personages. Its chief disadvantage lies in its inflexibility. The school program must be adjusted to the raidio program and the radio program is given but once. Educational research will advance significantly the use of this medium.

Audio-Visual

Sound film-slides. The sound film-slide, though often used in industry, has not been adapted in educational practice. Since the images are static, teachers have been able to give their own comments. However, the sound film-slide may come to serve a definite function in a highly individualized scheme of instruction.

Sound motion pictures. The sound film is the logical medium for presenting objects in motion with their accompanying sound effects. The simultaneous reception of sensations through two avenues increases the illusion of reality and stimulates the emotional response of the observer. The recorded oral explanation, when perfectly synchronized with the action on the screen, is probably one of the most versatile and effective educational mediums ever devised.

Contribution of the Sound Film to Instruction

The contributions of the sound film to instruction have been as yet only partially explored. Recent research studies[1] have revealed many important contributions. As the sound film is employed in an increasing variety of learning situations—on all levels and in many areas of the curriculum—

1 Arnspiger, Varney C., "Measuring the Effectiveness of Sound Pictures as Teaching Aids." New York: Bureau of Publications, Teachers College, Columbia University, 1933.
Rulon, Phillip J., "Sound Motion Picture in Science Teaching." (Harvard Studies in Education, v. 20.) Cambridge: Harvard University Press, 1933.

other significant uses will undoubtedly become apparent.

Presents reality. The sound motion picture presents the real situation with its elements of motion and sound. The object or phenomena and its operation becomes concrete and not a highly abstract idea. In fact, the situation may be made a *selected reality,* since unessential and distracting elements can be eliminated in production, so that the student is free to concentrate on the desired aspects. Highly abstract phenomena, such as the invisible air molecules or electric charges, may be shown in their true relationships.

Synthesizes learning experiences. Instead of learning consisting of isolated and unrelated facts, the sound motion picture makes possible the synthesis of a number of learning experiences into an integrated whole or entity. This is especially important in presenting such mass concepts as tariffs or the molecular theory of matter.

Standardizes truth. An unvarying presentation is possible with the sound film. A truly educational film should and must be authentic, since this medium creates such vivid lasting impressions. For this reason, any inaccuracy in the film is unfortunate, since it leads to a perpetuation of that error. In gathering impressions from reading, each individual creates his own mental image or interpretation. To a greater extent than other devices, the sound film gives a single interpretation.

Makes available the resources of the subject-matter specialist. The sound film enables the classroom teacher to approximate the subject-matter specialist in respect to content and the method of presentation. Even the subject-matter specialist as a teacher is aided by the sound film in presenting abstract or involved content. For example, pollination and fertilization are rarely taught in any detail in the elementary schools by the classroom teacher, because of lack of thorough understanding of the process and the inability to present the ideas with clarity to the pupils. The sound film may in such cases contribute to the content as well as the method.

Equalizes educational opportunities. Communities unable to equip their schools with desirable but expensive equipment will be enabled, through the use of sound films, to approach the more favored schools in the richness of their educational offering. In science instruction, for example, many desirable pieces of apparatus or models costing hundreds of dollars may be used only a few hours in a year. A motion picture film can often accomplish the same result in a sequence of a film.

Likewise, a complete film program will tend to equalize opportunities in respect to geographical location. New York City, Boston, Santa Fe, and almost every community, have certain educational advantages because of the museums, historical sites, theatres, natural features, climate, etc. Motion pictures will tend to give all schools the advantages possessed now by these individual communities.

Overcomes reading difficulties as a learning factor. In the traditional school, achievement in the content subjects, and even in some of the tool subjects, is closely correlated with

reading ability. Regardless of how brilliant a student is, he is decidedly handicapped if his reading ability is deficient. The sound film will tend to eliminate reading ability as a variable factor in achievement. His understanding is then dependent more on alertness and general ability.

Frees the teacher for guiding learner. The drudgery of reviews, reteaching, and explanation of abstract concepts and invisible phenomena, which consume so much of instructional time, may be delegated to the sound projector, thus enabling the teacher to devote more time to guiding, stimulating, and evaluating the work of his students.

Provides a flexible teaching device. The great variety of teaching situations encountered from one school to another, and also among individual classes, makes imperative the need for a teaching device that can be adapted to many different conditions of classroom instruction. From the point of view of the learner, the sound film is an individual instruction device, but from the standpoint of class organization, it is usually a group device, The sound film is a flexible device, since the screen material may be presented whenever the class is ready, and may be repeated with unvarying exactness whenever the needs and interests of the students—as individuals or in groups—dictate.

Economizes time in presenting subject matter. The sound picture's reality of impression and the careful scrutiny and selection of sound and screen elements before the film is produced, make this medium a ready vehicle for presenting certain types of subject matter quickly and effectively. In a single reel, students may observe every change and process that takes place during the life of a plant. Broad concepts, such as the molecular theory of matter, may be presented by the sound film in ten minutes much more vividly than through hours of lecture, reading, demonstrations, experimentations, and excursions.

Provides for class organization economies. Recent investigations have shown that for subjects chiefly concerned with attitudes and appreciations, very large classes may be formed under the direction of a master teacher who presents the materials of instruction by means of sound films. Classroom methods in large groups will differ from those in small classes. Recitations would be impractical. Discussions must be carefully planned. There may be committee work, with class reports on best work. Large group instruction will necessitate a more dramatic introduction of new units than is customary in ordinary classes.

Facilitating the Use of the Sound Film in Instruction

The foregoing discussion has charted certain of the specific contributions which the educational picture can make. But before these potential values are to be derived by boys and girls in the classroom, two conditions must be met. First, the talking pictures which are to be used for instruction must be prepared according to educational standards, the application of which insures an immediate contribution. Second, the local school system must make definite provision—in administrative organization, in su-

pervisory service, in curriculum integration, and in film materials—to render the talking picture a vital educative force. Worthwhile instruction is usually carefully planned in advance; the use of the talking picture can be no exception.

Survey of course of study in terms of available talking pictures. This step, in effect, means writing films into the course of study. It implies that all available films are studied for placement and general effectiveness. It implies also that the use of the talking picture will occur in planned situations for which it possesses known values. The outcome of this curriculum study should be the incorporation of specific film references in the body of each syllabus together with suggestions on their use.

Administrative and supervisory organization to insure smooth running of the audio-visual program. Teachers will naturally be reluctant to use the talking picture if unnecessary bother and irritating delays are experienced. The local system of requisitioning films, of film delivery, of operating projection equipment, and of providing suitable projection rooms, should make the teacher's use of the sound film as easy as turning to a map on the wall. There is no excuse for wasting the time and professional skill of the teacher with routine matters which can be handled adequately by a clerical and operation staff.

Summary

Interpreted in a broad sense, the contributions of the sound film to education are: 1, They make the learning real, and 2, They enlarge the scope of the learning.

The sound film, when properly produced, portrays every concept in a concrete manner. In motion picture production it is possible to control factors, such as size, tangibility, location, movement, sound, and complexity, so as to secure the desirable learning situation.

By means of instructional sound films the community or school extends the scope of its curricular offerings. This is particularly true in less favored communities, where educational equipment is definitely limited, and also in smaller schools where teachers are assigned subjects for which they are inadequately prepared.

TALKING-SLIDE-FILMS FOR VISUAL EDUCATION PURPOSES

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FOR a number of years the still picture, either in the form of glass slides or slide films, has been in use in educational institutions and is considered standard equipment for visual teaching. Likewise the phonograph has been serving certain purposes in education. A long period of research and experimentation has culminated recently in bringing to a high state of practicability the combined use of both; that is, the slide film of stills with the synchronized voice on phonograph discs. The nomenclature is less developed than the system itself, but "talking-slide-films" will adequately serve as descriptive terminology.

The talking-slide-film is an inexpensive and very simple talking picture, projected on the screen from 35-millimeter professional strip film of still pictures. The voice and sound effects are reproduced by an electric high-refrequency device employing transcription discs simultaneously with the exposure of the slide film frames (pictures). The entire equipment, consisting of projector and sound reproducer is properly housed in a light, sturdy and portable case, graceful in dimensions and attractive in appearance. Amplifier and loud-speaker are parts of the apparatus, which is very simple and fool proof.

In many institutions where standard projectors are available, it is only necessary to add the sound reproducer to complete the equipment, thereby saving a substantial part of the original cost.

To put the machine into operation, it is hardly necessary to do more than insert a plug into a light socket and turn on the switch. Interchangeable motor for A. C. or D. C. and two speeds, 33⅓ and 78 R. P. M., are important features of the device.

With this brief outlined description it is now important to invite the aid and co-operation of the educator in developing the idea that a new and practical mechanism is at his command to help lighten the burdens of the instructor and accelerate the acquirement of knowledge by the student on any particular subject. The aloofness of educators in general to new teaching fads and fancies, and their natural conservatism against accepting without thorough examination and study new mechanical devices, makes it essential to enlist their coöperation and support to ascertain the proper application of the talking-slide-film to the teaching profession.

It stands to reason that a considerable amount of pioneer and missionary work has already been done to bring out and develop this tool of teaching. Fundamentally, teaching and training

personnel in business does not differ materially from that in academic halls. Already, business has accepted the talking-slide-film as a standard implement for educating salesmen, agents, distributing and service personnel, and it may be conservatively stated that at this very moment some half a million business employees are being educated in various subjects.

Business executives examined the talking-slide-film very thoroughly before acceptance and adoption. They even went further; they consulted advertising experts who quickly saw possibilities in the talking-slide-film as a medium for inculcating sales promotional ideas in the minds of a consumer's audience. Talking-slide-film productions are dotting the country, teaching the buying public why, how, when and where it should use certain products. This medium is in constant use and new productions are being furnished regularly to disseminate new ideas and as a mechanical interpreter of the business executive. If, by a wave of a magic wand, there could at once be produced a voluminous library of approved teaching subjects translated into talking-slide-films and put into the hands of all schools together with the visual audio reproducer the goal would be speedily reached.

However, we must invoke a slower progress, for such a library must be compiled carefully and economically with authoritative coöperation. So much money, time and space has been squandered on moving pictures for education that it behooves a more careful handling of the subject. Fortunately talking-slide-films are considerably cheaper to produce, costing one-sixth to one-tenth that of motion pictures. Talking-slide-films require a much simpler technique, eliminating location shots and professional casts. Educational material is readily available on almost any subject. It is likewise economical for institutions to create their own talking-slide-films on special subjects.

It is about here that the question will arise as to the advantages, if any, that the talking-slide-film will have over various other media of visual education, such as slides with teacher's voice and interpolations, slides with titles and sub-titles, silent and talking motion pictures.

The talking-slide-film should show stories properly standardized and adopted by the faculty, just the same as accepted text-books. Interpolations by the teacher can always be made with talking-slide-films at any stage of presentation. Each and every frame can be held longer for observation than the exposure of ten seconds usually consumed. Frames and voice can be turned back for repetition and explanation at any point, although it is best to let the story run through first and then go back and repeat parts or all. This flexibility is hardly obtainable with the other media, so it is obvious that talking-slide-films do furnish all the advantages of simple glass and slide films and stereographs with many additional and valuable features.

Of course, it is readily understood that a ten-minute continuity cannot replace the instructor or the text-book and adequately cover elementary astronomy, biology, civics, etc. Neither can ten minutes comprehensively give all the events incident to the history of Washington or Lincoln. But it will

reach far in taking the boredom out of study and furnish a real effective assistant to the teacher. On the other hand, the average speech of 150 words a minute synchronized with 35-40 frames can tell a very effective story, sufficient in every way for the purpose intended.

Long before the development of talking-slide-films it was found by educational experts that while motion pictures have their assignment in teaching, still pictures are just as effective and in some cases more so in their field.

Still pictures can be left exposed longer for observation, and talking-slide-films definitely possess this virtue, while motion pictures give a quick flash of a sequence across the vision in a six-second technique.

As a rule an educational motion picture does not essentially require motion above an average of 25% of the whole, and some can dispense completely with motion. For instance, a study of commercial architecture would not require motion to show the Chrysler, Woolworth, or Empire State Buildings, or the art motives of the facades. Motion pictures cost from five to ten times as much as the same subject handled by the talking-slide-film principle. Motion pictures require special properties and location shots with professional casts, while talking-slide-films can utilize the material available in the schools. Motion pictures take a long time at high cost to produce, with rehearsals, retakes, editing and cutting. Talking-slide-films reduce these costs to zero.

Institutions have the advantage of being able to produce their own talking-slide-films when special subjects are required for their students, without hiring professional talent.

Any student can learn how to operate a Visual-Audio unit in a few minutes. An apparatus for motion pictures is an expensive and complicated affair and is not easy to operate and subject to frequent disarrangement.

This article does not predispose an attack upon the usefulness of motion pictures for educational purposes. It merely conforms to the researcher's findings that motion pictures' usefulness should be confined to their peculiar province,—the exhibition of moving objects and particularly to facilitate the analysis of motion. Still objects are outside this province and belong to talking-slide-films. It is uneconomical to employ motion pictures for that which can be demonstrated by other means. It is the belief of advocates of the talking-slide-film that this principle of visual and sound education is more conducive to concentration and retentiveness of memory than the quick flashing of a motion picture with its six-second sequence technique.

The talking-slide-films provide the student, depending of course upon the skill of the scenarist and his treatment of sequence, with a stimulus and persuasibility enhancing his interest in the language of text-books and making it more meaningful. The student will evince more interest in the subject and the lesson from the talking-slide-film superinduced by the teacher's interpolations will sink deeper.

The talking-slide-film comes to the educational institution at a most propitious time. With appropriations and funds for education much cur-

tailed, a considerable part of moneys assigned to buying motion pictures and apparatus can be diverted to talking-slide-films with a greatly increased return and effectiveness. A great many subjects heretofore considered for motion pictures can be translated to this new medium and a large addition made to the list of subjects.

It is confidently hoped that educators will investigate talking-slide-films at the earliest moment and adopt them in a proportionate ratio to those now being utilized for business education.

VISUAL TRENDS IN RELIGIOUS EDUCATION

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VISUAL methods have long been in use in the practice of religion, for prior to the reflective period, when religious cultures passed into the creedal and doctrinal stage, religion was primarily a performance to be participated in and *observed*. Primitive man danced out his emotions, and those who did not take part in the dance, looked on, vicariously sharing in the religious exhilaration through visual means. The state cults of Greece and Rome, and the national religious festivals of the ancient Semitic cultures, mediated their religious values by means of impressive processions and ceremonies. Religion was a spectacle to be observed. The Oriental mystery cults, as well as those of Greece and Rome, preached salvation through pantomime and dramatic ritual. The magnificent ritual of the Catholic Church, which gradually took form through centuries of development, centering around the Mass, was again a visual presentation of the benefits of religion. And in the passion plays of *Olde England* and the mystery plays of medieval times, we see a further development of the visual and dramatic expression of religion. It is instructive to note also that stained glass windows originated, not as decoration, but as a means of teaching the stories of scripture to the illiterate masses during the middle ages.

With the coming of the Reformation, visual methods were abandoned among large sections of the Christian Church, for Protestantism revoked the dramatic expression of religion in favor of the rational presentation. The sermon displaced the ritual of the Mass. The preacher displaced the performing priest. The atmosphere of the stage and altar gave way to the simple and barren environings of platform and pulpit. The gospel was to be heard and reasoned; not seen and contemplated. This basic shift in method of presenting religion to the worshiping masses resulted in a confirmed suspicion of any effort to dramatize religion through such visual means as ritual, play, or pantomime.

In recent years there has been a gradual reversal of this reaction, ac-

companied by a renascence of the dramatic element in religion. The strenuous mood of rational Puritanism has gradually given way before a growing alliance between religion and art. And the entrance of the methods and symbols of art into religion has steadily lessened the vogue of dogma and moral codes. With this change in the Protestant temper have come many new experiments in the method of presenting religion. Church worship has entered upon a reconstructive period. Religious instruction in the church school has undergone radical change. And the teaching of religion in colleges and universities is on the brink of new adventures, with visual education strongly beckoning it along its course.

I.

The earliest expressions of this visual trend in recent Protestantism were by no means conscious efforts to revive the visual method. Foreign missionaries, returned on furlough, eager to advance their cause, brought the stereopticon into the church auditorium and temporarily diverted the attention of church-goers from the pulpit to the screen. Ministers, quick to see the attentive response of their congregation to illustrated lectures, and perhaps welcoming the relief from sermonizing, introduced occasional Sunday evening stereopticon services, presenting scenes from home mission fields, illustrated talks on Christian hymns, or scenes from the Bible and ancient Christian times. Then came the moving picture films, adapted to church use. The growth of interest in the use of films as an aid to church services is strikingly reflected in the developments of the church department of certain screen magazines, particularly *The Educational Screen*. By 1923 sufficient interest had developed among Protestant ministers to encourage the film people to cater to the new field. In June of that year, the editors of *The Educational Screen* introduced a department known as "Pictures in the Church," under the direction of Dr. Chester C. Marshall. This department was for the purpose of pooling the experiences of ministers who had successfully used the moving picture in their churches, and for reviewing films especially adapted to church use. The department was discontinued in 1927, but in 1931 it was reopened with new vigor and more conscious organization as "The Church Field," under the management of R. F. H. Johnson. The discussions and reviews in this section of the journal throughout the succeeding period throw interesting light upon recent trends and provide a fair index to the progress of the film in the Protestant Church.

The forming of The Religious Motion Picture Foundation (Chatham, N. Y.) in 1925 was an important step in furthering the use of films in the church. This organization was established by Wm. E. Harmon, a retired real estate man and philanthropist. The object of the foundation was to employ expert film directors and actors to produce films on a non-commercial and non-sectarian basis for use in church services. Out of this venture came such important films as *King of Kings, Christ Before His Critics, Forgive Us Our Debts,* and *The Rich Young Ruler.* This organization has been an important factor in the development of the religious film.

In the earlier stages, the stereopticon slides and moving pictures were largely appendages of the church service. Recently effort has been made to integrate the film and slide in the order of service on a basis with the music, reading, and preaching. A number of varying experiments along this line have been tried. In his book, *Screen and Projector in Christian Education* (Westminster Press, 1932), H. Paul Janes has described in elaborate detail how the worship service has been built around *theme pictures,* using both still and motion pictures. Pictures are used to illustrate the theme of the various steps of the service. A picture is selected to illustrate the prelude and offertory, another to illustrate the central idea of the hymn, another to illustrate the mood of the sermon, etc. Thus the screen combines with music, literature, and oratory to produce an effective service of worship. At the University of Pennsylvania, a series of devotional services, under the auspices of the Christian Association and Department of Religious Education, was presented by H. Paul Janes, using motion pictures with sound accompaniment. *The Cinema Church,* in Kennington, England, represents another interesting adaptation of pictures to church worship. Throughout the week, slides and moving pictures are employed for purely recreational purposes; but on Sunday evening, they conduct what they call a "Cinema Service," followed by a moving picture film. A sample service will illustrate the procedure: 8:15—Cinema Service: 1. Introit slide. 2. Prayer slide. 3. Bible reading slide. 4. Notices. 5. Collection and Hymn. 6. Bible slides and address. 7. Vesper. 9.00 P. M.—Film. Among the new developments in church worship in Germany, a similar service of worship known as the *Lichtbildergottesdienst* has been devised. This type of service does away with hymnals, prayer-books, and the sermon, for the songs and congregational prayers are thrown upon the screen, and instead of a spoken sermon, biblical stories and other forms of religious drama are portrayed. A series of such programs has been published by Pfarrer Horn of Berlin in a volume called *Feiernde Gemeinde.*

II.

A more systematic development of the visual method in the religious field began with the use of pictures and dramatics in the church schools and young peoples services under the stimulus of religious education. Religious educators have followed close upon the developments of visual education in the field of general education. Obviously this has led to an increasing use of pictures in the church schools, particularly in the primary and secondary departments. Mounted pictures and slides as well as motion pictures have been employed. The mounted picture has perhaps been more widely used, for the reason that it involves less expense, and also provides a project which the students themselves can work out. In a University of Chicago master's thesis, written by Charlotte P. Kumel, entitled, *A Technique for Collecting Pictures from Current Sources for Use in Religious Education* (1927), an intensive study of available materials has been made to determine the kinds of pictures that best achieve the ends which religious

educators seek in the church school. In this Miss Kummel has followed the standard test suggested by Freeman and McClusky in their book, *Visual Education,* adapting it, to be sure, to the specialized objectives of religious education. An extensive list of available picture materials for this purpose is also included.

Perhaps the most adequate and authentic publication on the use of pictures in religious education is the book by Albert E. Bailey, *The Use of Art in Religious Education* (Abingdon, 1922). This book undertakes to bring the best pictorial art of the world's galleries into the service of religious education, building upon the hypothesis that "soul culture is achieved through meditation on values." The distinctive achievement of this work, in the words of Prof. Norman Richardson, is that along with its "strong and intelligent advocacy of the use of art," the author has "formulated a comprehensive and pedagogically sound theory" regarding the use of pictures in religious education. "Pictures and statues have ever been used. Henceforth they will be used intelligently."

The use of motion pictures has become an established practice in church schools among most of the Protestant denominations in America. The educational divisions of some of the denominations, along with the International Council of Religious Education and the Federal Council of Churches have created special bureaus which stand ready to provide the churches and church schools with information regarding films and slides. The Presbyterian Board of Christian Education has taken the lead in studying the use of visual aids. It has set up a Division of Visual Aids in its educational department. Also, the Curriculum Committee of the Presbyterian Board of Christian Education, which is responsible for setting up the church school curriculum, has appointed a Visual Aids Committee, including members of the curriculum-building department. Thus visual education has become an established phase of the regular curriculum in the Presbyterian Church. It was at the suggestion of the Presbyterian Board of Christian Education that the Commission of the International Council on Religious Education proposed the creation of a committee to study the use of motion pictures in religious education.[1] In 1931 it was voted that a special committee on motion pictures be appointed by the Central Committee of the Educational Commission to study the possibilities and problems involved in the use of motion pictures in Christian education, and to coöperate with the denominations of the council experimenting with its use.[2]

Apart from the use of pictures and slides, the church school in recent years has employed the visual method in the form of pageantry and drama. Pageants and pantomimes, depicting stirring episodes from Bible stories were the first to be tried. Other forms of pageantry followed, centering around patriotic events and heroic periods of history. This type of celebration has been given particular vogue in the Daily Vacation Bible School prgram.

During the last few years, religious

1 I. C. R. E. Yearbook 1930.
2 Yearbook 1931.

drama has entered upon a new and more significant stage in the program of the church and the church school. The church school has gone Hollywood and has taken to producing its own stars. According to Eastman and Wilson, in their recent book, *Drama in the Church,* more than a thousand American churches now have dramatic groups. A recent study of the sixty-five leading churches in Chicago revealed that fifty-six of them were producing religious plays. Those 56 had produced 200 dramas and pageants in twelve months. Another study of 342 churches in the Middle West revealed that 258 of them had produced 840 plays during a year.[3]

Perhaps no one has contributed more to the development of the new religious drama than Fred Eastman of the Chicago Theological Seminary. He may, in fact, be considered the pioneer of this movement. He has been writing plays for the religious stage for a number of years, and through his courses on religious drama in the seminary has contributed immeasurable impetus to the development of religious drama in this country.

The new religious drama is not restricted solely to portraying Bible scenes and characters. "The churches have now reached the place," write Eastman and Wilson, "where they are asking for strong modern dramas with humor and imagination, portraying the emotional and spiritual conflicts of human life, and shedding upon them the light of religion."

"In the beginning it was somehow felt that a religious drama must talk much about religion, and about Christ and the church; it must use biblical characters and to a large extent biblical stories. But in the course of the years we have come to see that what makes a play religious is not the material it deals with but *the total effect of the play upon the audience.* . . . The churches have presented many an irreligious Bible play, and the theatres many a religious modern one."[4]

This means that religious drama in the church has passed out of the naïve stage and become an authentic expression of modern art. In the words of Dr. Charles Clayton Morrison, "The drama is destined to play an increasing part in the activities of the future parish."

The dramatic element has also found its way back into Protestant church worship. Dramatic services, in which religious drama is woven into the ritual of worship, have become regular and popular features of many young people services throughout the country. One of the most widely known and fully developed programs of this sort is the experiment in the Riverside Church in New York City, sponsored by R. C. Alexander and O. P. Goslin. In their book, *Worship Through Drama* (Harper, 1930), they have presented twelve typical dramatic services used in the Riverside Church.[5] Under their leadership, a Guild Chapel has been organized, around which it is hoped a country-wide movement will develop for the purpose of creating and promoting dramatic services of worship among the churches.

The use of visual methods in the

3 Eastman & Wilson, op. cit. p. 16.
4 Op. cit. p. 17.
5 Other important publications in this field are: Candler, Martha, "Drama in Religious Service" (Century, 1922); Miller, Elizabeth, "Dramatization in the Church School" (U. of C. Press, 1923); Whiting, Isabel K., "Dramatic Services of Worship" (Beacon Press, 1925).

teaching of religion in colleges has not as yet been widely developed. But there is a fertile field there for experimentation. If one assumes that the object of teaching religion in the Liberal Arts college is to awaken appreciation for the cultural values of religion and to inspire devotion to the enterprises of religion which are worthy, no better means can be found than through lantern and slide, or projector and film. The effectiveness of visual methods in teaching biblical courses, whether for the purpose of imparting information, or of motivating conduct, has been adequately demonstrated in the church school. And the materials available for such a course are more than ample.[6] The History of Religions has come to have a permanent place in the college curriculum. The chief value of its study is its liberalizing influence. Through association with the great religious personalities of all times and races, their religious forms and philosophies, their art and inspired literature, students come to have a profound regard for these religious cultures of the world. Here again the lantern and screen would contribute immeasurably. What travel does to illumine understanding of distant lands and to increase men's sympathy for strange people, pictures may do for the student stay-at-home. In no other phase of religious education would the visual method be employed more fruitfully.

Finally, there is an opportunity to acquaint student groups with the significant activities of the operating churches through visual means. Much of youth's indifference to organized religion is due to their ignorance of the active modern church. Having lived all their lives in small communities where church life amounts to little more than picnics and meetings, their conceptions of the church many times is restricted and meager. They know nothing of the vast social enterprises that operate under the stimulus of church initiative or of the civic significance which certain vigorous religious organizations have achieved. These could be presented with impressiveness and meaning through slides and films designed for that purpose. The fact that is so often overlooked is that communication by language is a gamble at best. Words deceive and obscure meaning. And when the intercourse is between scholarly texts and college freshmen, the deception is greatly magnified. The advantage of the visual method is that it is direct and vivid. There are no intermediary symbols to confuse and confound. This is of enormous value in the teaching of religion, for the language of religion is peculiarly abstract and mystifying. With visual aids to illumine the discourse, the use of language would be much less a gamble.

III.

Visual education is having a vigorous vogue in the religious education of Europe. The Protestants of Europe at first looked askance at the entrance of the film into religious activities. This feeling was particularly manifest in Germany, where Lutheran traditions were dominant. But attitudes there have radically changed

6 In the appendix of his "History of the Hebrew Commonwealth," C. F. Kent calls attention to the value of illustrations in teaching the Bible and Old Testament history. He has prepared 140 historical views with interpretations, and recommends further the use of stereographs on Egypt, prepared by Underwood and Underwood, 417 Fifth Ave., N. Y.

now. At present there are Protestant Cinema Chambers and Services in practically every part of Germany, so that every parish and village can be supplied with films. According to Robert Hellbeck, in an article on "The Film in Protestantism,"[7] at least 7,500 moving picture performances were arranged by Protestant organizations during the winter of 1928-29. In 1930, the leading branches, specializing in popular education by means of the film, were merged in The Protestant Motion Picture Association of Germany. There is a widespread and growing desire in Protestant circles for films as a regular feature of parish entertainment.

The Catholic churches in Europe have made much more extensive use of the film in religious education than have the Protestants.[8] The International Congress at Munich in 1929, and the Paris National Congress of the same year, definitely declared the cinema to be an important instrument of propaganda and education and strongly advocated the development of educational films and "family films" for purposes of religious propaganda. Echoes of these two congresses reverberated throughout the world, and soon other countries were introducing the film into Catholic education. In Spain, for example, the Salesian Order, which educates a great many of the poorest children of that country, began using moving pictures as a means of vacation school instruction. Again, the Viscaya Provincial Deputation set up moving picture projectors in all the schools of that province. And the Parochial Cinematographic Institute in France has taken to using the film for moral and Christian education. The production of films on the Catechism has developed extensively in France.

The number of Catholic cinema reviews is also an index to the growing use of films in the educational program of the Catholic Church. Some of the important ones are: the German *M. K. B. Film Rundschau* of Essen, the French reviews, *Les Dossiers du Cinema,* and *Le Fascinateur* of Paris, and the Italian *La Rivista del Cinematografo* of Milan. In America, the chief Catholic film journal is *The Catholic Theater Movement* of New York.

The extent to which Catholic film organizations have developed is further evidence of the earnestness of the Catholic film movement. The Popular Association of Catholic Germany in Munich was one of the first to organize. It has since been changed to the *Neuland Kinematographie* of Cologne. It is also known as *Bild und Film Zentrale.* This association has perhaps the largest collection of educational films in Germany. Another organization, known as *Stella Maris,* has been operating since 1921. Similar organizations exist in other countries of Europe. In France there is the *Comité catholique du cinématographe;* in Italy, the *Consorzio Utents Cinematografic Educativi* at Milan; in Belgium, there is an active organization centering around Canon Broheé of Louvain; in Switzerland, the *Vereinigung der Freunde der Kinoreform*

7 "International Review of Educational Cinematography," 1931.

8 Three excellent articles on the use of films in Catholic education are: "Catholics and the Cinema," by Joseph Reymond (trans. from French), "International Review of Educational Cinematography, 1929"; "The Film and Catholicism," by Richard Muckermann (from the German), Ibid., 1930; and an editorial, "Religious Films," Ibid.

at Zurich; the *Heroldfilm* at Rorsbach, and the *Schweizerischer katholischer Volksverein.* Organizations are found also in Austria, Holland, Jugoslavia, Spain, England, Czechoslovakia, Hungary, and America. Since 1928 these organizations have been brought together under a central international commission known as The International Catholic Film Committee, with offices in Paris. Thus once again the organizational genius of the Roman Catholic Church has asserted itself in perfecting a comprehensive working machinery for promoting visual education in its schools and parishes. It became clear from reports of the General Meeting of the consortium of the members of the C. U. C. E. (Catholic Organization of the Educational Cinema) at Milan that the development of the use of the motion picture film in religious activities and college instruction within Catholicism was progressing.

Visual education has made impressive inroads upon the field of church life and religious education, both in America and in Europe, as this survey doubtless reveals; but its possibilities have only begun to be recognized and explored.

AN INTELLIGENT MOVIE PROGRAM

WILLIAM H. SHORT
DIRECTOR MOTION PICTURE RESEARCH COUNCIL

The Council sponsored the Payne Fund studies of the social significance of the motion picture.

THE motion Picture Research Council has successively commanded the services, as presidents, of Dr. John Grier Hibben, Dr. A. Lawrence Lowell, and Mrs. August Belmont,—the first remaining in the office until his lamented death; the last until overstrain compelled her retirement from the presidency, though happily not from the Board; while the third also remains as honorary president and elder statesman. It is a rare leadership. There are reasons for it and they are not far to seek.

I. An Affirmative Purpose.

From the beginning, the Council has cherished an affirmative purpose with reference to problems connected with motion pictures. It has seen in them not so much a screen to be cleansed, as a new art to be developed.

During the seven years of its life, the Council has continually reminded itself that within the memory of men of middle age a new art had been discovered; that on the technical side it had been developed to a point of perfection equal to that of printing at the end of four hundred years; that in our characteristic manner this art had been commercialized for gain, while its social potentialities had been largely neglected; that the screen was manifestly exerting a powerful but questionable influence on its public, and especially the young and inexperienced who flocked to its allurements; that this new art by right belonged to the whole people rather than to any group of exploiters, and that it was high time to know something about it and do something about it.

Learning that the Payne Fund shared its interest and purpose, the

Council secured its support. It next spent a year in a preliminary survey of the field, after which it formulated and agreed upon its purpose as being to discover and develop "national policies in motion pictures" adequate to secure permanent development of this new and superb art; and then to lead in carrying those policies into effect.

II. A New Social Technique.

A purpose so ambitious and difficult demanded a technique that would both command universal respect and lay an unshakable foundation. Under the guidance of experienced social workers and social scientists a comprehensive plan was worked out that has been characterized by Dr. Ernest W. Burgess, the eminent sociologist of Chicago University, as a "well thought out program" . . . a "procedure which might well supply the 'missing link' between scientific research in the psychological and social sciences and its application to the pressing problems of modern society."

The first step in this plan was the working out by this highly competent and specialized group of a research program; the second was fact-finding by eminent psychologists and sociologists through four years of scientific study; the third was *policy forming,* on the basis of the facts so ascertained, by a group of citizens possessed of the vision and courage both to block out and carry through fundamental policies for the redemption and development of the motion picture art.

III. A Scientific Basis for Reconstruction.

In Studies already made, in progress, and planned, an adequate and scientific basis for this purpose of redemption and building has been or will be obtained.

The Payne Fund studies found that the motion picture, which in essence is a way of harnessing and universalizing the drama, is the most potent educational instrument possessed by man and that the network of movie theatres is a new and dominant school of manners, morals, and conduct, especially for children and youth. It found also, that the manners and morals pictured on the screen were prevailingly in conflict with those which for three centuries had animated the American home and school and church.

These findings, published in ten volumes by the Macmillan Company, within a year have become classics. They have received the annual medal of *Parents' Magazine* and first mention by the American Education Research, while two of the ten volumes have been included in the list of Best Books in Education—*Motion Pictures and Youth,* by Charters, and *Our Movie Made Children,* by Forman. The latter, a summary in popular form, has been *double-starred.*

Widely published and commented on by the press, the findings have startled and quickened the nation. Out of them has grown the *Legion of Decency,* and out of them, it is to be hoped, will also come a fundamental and constructive development through many years.

A legal study of the trade practices of the motion picture industry is being made under the direction of a research committee of which Dr. Wesley C. Mitchell is chairman. This is expected to report during the autumn of 1934 and to throw light on the nature of

some of these practices, whether they be social or anti-social. Other studies are planned, though not yet financed and undertaken.

IV. Fundamental Lines of Development.

The men and women behind the Motion Picture Research Council have adhered to their original purpose of developing national policies in motion pictures, and have refused to be satisfied with easy and half measures. While they are not people who rail at the idea of censorship, they saw at once that censorship could not contribute to the positive and constructive development they wish to promote and guide. They dismissed also, as restrictive, futile, and necessarily destructive of the higher educational and artistic development of the cinema, the proposal to put it in leading-strings to a commission of Federal supervisors and censors. They also saw that monopoly of the art must be destructive both of artistic integrity and of the possibility of free development.

When it came to program making, the Council not only studied the Payne Fund findings, but also called in the experts who had given years of study to the questions involved. Through individual conferences and referanda that occupied many months, the tentative lines for its future building were laid. Over a considerable period these were considered and weighed. Finally a conference was called by Mrs. Belmont which sat for four days in Washington, reviewed the field, and recommended a program which has been adopted by the Council. So thoroughly has it been done that it may well be looked upon as the permanent lines along which the motion picture art must develop in order to reach its full stature.

V. A Constructive Program.

These lines of development include the following:

1. A free art. The motion picture must develop free from the trammels either of censorship or of monopoly. Productive minds which have motion pictures in them must be as free to produce and market them as are authors to write books or singers to produce songs. Every community, in turn, must be as free to choose its movies as it now is to select its magazines, it novels, and its songs. To thrust vulgarity, wrong standards and bad taste before the eyes of every adult and child by means of block-booking and blind-selling is as objectionable as it would be to compel a reader to buy every book on a publisher's list as the price of getting the one book in it that he wanted to read. These restrictive and oppressive practices must go, in order to open the way for free production and free exercise of the public taste.

2. Organized communities. So long as it was thoughtlessly taken for granted that the movies were merely entertainment—"just theatre," as it was sometimes expressed—it was natural that movie programs should be left to any showman who could command a theatre. But now that it is known that we are dealing with an exceedingly influential school of manners, morals and conduct, to continue this unhappy-go-lucky way of doing is even more unthinkable than it would be to leave the *minds* of our children to the exploitation of any pedagogic quack who might wander

into the community with the desire to make a living at their expense. Literacy is important, but conduct and character are still more important.

Voluntary committees for dealing with movie problems are highly useful as a first step. But who that has read Dr. Charters' or Mr. Forman's summaries of the findings of scientific research on the subject can doubt that every argument in favor of an official school board to deal with "book learning" is a still stronger argument for official boards in every community to promote and guide the film? Already has the enterprising publisher of *Parents' Magazine* developed a Model Movie Ordinance as a suggestion of measures that might be adopted.

3. Motion picture appreciation. In its review last January of the Payne Fund studies, *The Christian Century* advises every reader to secure the book on this subject by Dr. Edgar Dale. "Mr. Dale lays the foundation for the motion pictures of tomorrow. His plea for a national film policy that will allow the great dramatists to express the fundamental mind of our civilization with artistic integrity is a prophetic message. Trade journals of the motion picture industry have been inclined to treat the efforts of the Motion Picture Research Council . . . as simply directed to remove the dirt from pictures. Dr. Dale expresses for all of us a far higher goal. . . . We want *great* films, films that will not only entertain without destroying something precious, but will contribute something positive toward the upbuilding of personality and of our national social life." In common with the National Council of Teachers of English, the Research Council is promoting the use of Dale's book in the schools, so that enjoyment and understanding of the film art may be increased, and the critical spirit developed.

4. Separation of child and adult audiences. This necessity underlies all the thinking and planning of the Motion Picture Research Council. To make all films "safe for children" is not desirable. The adult mind has its rights. But to impose sophisticated films on children is still less tenable. The necessary solution is to develop a juvenile film library not less varied and complete than is our juvenile literature.

Happily the knowledge necessary for doing this is in hand. The psychologists know pretty well the schedule and time-card of children's awakening interests. Child interests undoubtedly lend themselves to production of films of as high quality and as many thrills as do adult interests. Children should have more films, not fewer; but their themes should meet the child's wants and needs. A movie curriculum for children, matched at every point by acceptable juvenile films, is quite as practicable as is an equipment of curricula and text-books for the public schools. It is perhaps a development for the state to foster rather than the private producer.

5. The Film Institute. The capstone in the program of film development as planned by the Motion Picture Research Council is a National Film Institute for the permanent promotion and guidance of film development in the interest of the whole people. Such an Institute would need adequate endowments and a varied and expert staff. Though coöperating

with commercial motion picture interests, as with many other phases of the national life, it should be wholly free of movie entanglements. That such Institutes already exist in Italy, France and England should spur to early achievement here, where need, opportunity and wealth are greater.

The Motion Picture Research Council is not content, after making studies and outlining policies, to leave them, as the fish leaves its spawn, to chance fruition. Its next step—in which it is now engaged—is to enlist in this scientifically intelligent and useful program, all national, state and local organizations with civic interests.

DO MOTION PICTURES CONFLICT WITH STANDARDS OF MORALITY?[1]

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Professor Robert P. Wray is a member of the faculty at Pennsylvania State College. He collaborated with Professor C. C. Peters of the same university in the preparation of Peters' "Motion Pictures and Standards of Morality," published by The Macmillan Company. This book reports one of the well-known and important Payne Fund Studies of the social value of the motion picture.

WHAT I shall have to say on the question of the conflict of motion pictures with standards of morality, is based upon one of twelve independent investigations which were conducted at various universities under the sponsorship of the Motion Picture Research Council and the subsidization of the Payne Fund.[2]

The purpose of the study was to discover whether motion pictures conflict with morality. We were concerned to know whether the acts depicted in commercial motion pictures conform with the *mores* of society. Or, if they deviate, we wished to learn at what points, in what direction, how frequently, and how far. It should be noted that this is a very different question from asking whether the movies are "right" or "wrong," "good" or "bad." Few people are competent to answer this question, although many, from the casual movie attender to the boards of censure, may think that they can.

Society's moral code is simply its system of *mores,*—those patterns of conduct to which practice for some time by groups of people attaches certain welfare elements and ethical values. Morality is conformity to the *mores.* It is very difficult to study morality scientifically. Certainly no group is in a position to look objectively at its own *mores,* because it is too much enmeshed in them. The *mores* go simply unnoticed because they are so familiar.

In order to study the relation of the *mores* to behavior in motion pictures, and to indicate in quantitative terms the amount of divergence between them, it is evident that we must have measures of both of these in terms of the same unit. Unfortunately,

1 A paper given before a meeting of the Department of Visual Instruction of the National Education Association in Washington, D. C., July 2, 1934.

2 For a detailed account of this investigation see, Peters, C. C., "Motion Pictures and Standards of Morality," The Macmillan Company, 1933.

no quantitative study has been made of the status of the *mores*. Studies of the moral values of motion pictures have been made, but mostly in terms of general impressions rather than in terms of specific units.

Since the *mores* go normally unnoticed, the only way in which to make them articulate, unless to an outside observer to whom the group is wholly strange and "different," so that they may be studied objectively, is to produce conflicts with them. We can at any time bring them to the level of focal activity by outraging them. This may be accomplished by having performed in life acts that lie beyond the limits of routine approvals. Or it may be achieved in some degree by having these acts performed under the observation of the members of the group in some symbolic fashion that gives a realistic semblance of life activities—as in pictures or in verbal narratives that generate vivid images in the minds of the beholders. In our study it was not feasible to utilize the conflicts that normal life affords, since these come too sporadically. We resorted, therefore, to described bits of conduct, hoping that we could make these serve the purpose of producing in the reader a response similar to that which would be called forth by the corresponding real scenes, or at least enable him to know how he does respond in life to scenes of that sort. For this purpose we constructed a series of scales, each describing bits of conduct of varying degrees of "badness"—the extent of "badness" being measured by the degree of shock indicated by the proportion of members of the group aroused to resentment by it. By this technique we were able to get these intangible and elusive social phenomena into quantitative form, so that they could be subjected to statistical investigation.

Out of the many elements of the moral code that we might have investigated we chose four that seem to play-up largely in motion pictures. Two of them, kissing and caressing, and aggressiveness of a girl in love-making, we chose because they appear prominently and are subject to much criticism and speculation. The other two, the treatment of children by parents, and democratic attitudes and practices, are somewhat more sober in nature. For each of these types of conduct we needed samples of various degrees of offense against good taste. In our final set of scales we had 326 different scenes distributed according to the four phases of conduct as follows: aggressiveness, 89; democracy, 82; treatment of children, 78; kissing and caressing, 77.

The nature of these scenes may be illustrated by the following. The first two are taken from the scale of discipline of children.

+.93 *Mother Reasons With Daughter to Keep Her From Wrong Conduct.*

Helen has announced that she is going on a motor tour with three girl friends and will be gone about two months. Mrs. Wills wants her daughter to have a good time and to "see the world," but she does not think that young girls should be traveling alone far from home. However, instead of arbitrarily forbidding the trip, she talks with Helen about the matter, stating her reasons for disapproving it and patiently meeting any points that Helen may have to offer.

The above scene received the highest rating among those concerned with the discipline of children by their parents. The scene from the same

scale that received the lowest rating is:

— 2.37 *Father Whips Boy Brutally.*

Behind the door hangs an old razor strap. And if Jim does anything that displeases his father that strap sees service. Dinner is ready and the family are all there but Jim. He arrives just as the meal is over, having been detained as a result of watching a school baseball game. Immediately the father grabs the boy, shakes him vigorously, throws him to the floor several times, and then proceeds to whip him with the razor strap until Jim cringes helplessly on the floor.

Typical scenes from the scale on Kissing and Caressing are:

+ .14 *Betrothed Persons Embrace in Public.*

Miriam goes to the railroad station to meet her fiance, Gilbert, who has been away on a business trip for several weeks. As he steps off the Pullman they embrace quickly, but withal, warmly, and hurry off to a waiting taxi.

— 1.02 *Kiss as a Symbol of Gratitude.*

Sally is very grateful to Blair, the go-between, for having asked his friend to dance with her. To thank Blair she runs to him, kisses him lightly on the lips, and then as suddenly disappears.

Our task at this stage was to get quantitative values for the "badness" of each of the scenes. We chose to derive these evaluations from the following five groups jointly representing a random sample of modern American society: fifty college seniors; twenty-five middle-aged college faculty members and their wives; forty-two socially élite young women from New York and Baltimore; twenty-seven factory working boys and eighteen factory working girls.

To each of these persons we gave four three-pouched envelopes, each of the envelopes containing one of the four scales with the scenes mimeographed on slips of paper. From these hundred and eighty-seven raters were sought responses that we believed were in harmony with the psychology of the *mores*. In the functioning of the *mores* the responses are emotional, impulsive, and unratiocineated. In most cases the situation is taken as matter-of-fact; the act is merely customary and passes without notice. But when the act is unconventional it challenges attention; it arouses fear and resentment if it deviates from the customary in a direction that the group feels to be dangerous, or admiration if the deviation is in the direction in which the group aspires to move. The following directions that were given to the raters illustrate the procedure

In this package is a number of concretely described bits of conduct out of which we wish to make a "scale" for measuring goodness or badness of conduct . . .

Of some of the bits of conduct described on the cards you will disapprove; they are the kind that would more or less shock you if you saw them happening in real life. You would feel intuitively that they are more or less wrong. Place on pile 1 all of the cards that describe such conduct.

Some of the cards may describe conduct that you not only approve but that you actually admire. Place these on pile 3.

The remainder of the cards will describe conduct that you think O. K. but "nothing to brag about"—such conduct as you see so regularly that you take it as perfectly "natural" and "matter of fact." Place these on the middle pile—pile 2.

We have no idea that the three piles will be of equal size. Indeed, you may not feel that any of the cards at all belong on the "admired" pile or on the "disapproved" pile. Be governed by your own feelings in the matter, not by what people are accustomed to say. A good test to apply if you are uncertain is to ask yourself whether you would feel at

perfect ease if someone very dear to you would do the act in question under the conditions described on the card — sister, mother, daughter.

The working-up of the returns involved some statistical treatment that need not be discussed in detail. From the percentages of people placing any individual scene in the categories known as "Approved," "Neutral," "Disapproved," a resultant "badness" value was derived for the item. The maximum badness value (where every member disapproves the act) is —3.00, while the maximum goodness value is +3.00.

In order to have a systematic measuring instrument we arranged the items of conduct according to certain sub-scales and in order of the obtained values from the highest plus values down through zero (where as many approved as disapproved) to the low end of the scale.

The scales were then submitted to persons representing fifteen type-groups for the purpose of determining how far down each scale conduct could go and yet be within the approvals of these several groups. The groups employed were: adult miners and their later-adolescent sons and daughters, graduate students, negro school teachers, ministers of the gospel, adult factory workers, college seniors, business men, adult members of a Brethren church and their later-adolescent sons and daughters, and university professors of national reputation. We also had the results obtained from the five groups contributing to the original scale evaluations.

The fifty faculty members and wives at the Pennsylvania State College were the most conservative of our groups in respect to all four of the elements of the moral code. Toward the opposite end of the scale stood the university professors and leaders of social reform. On the whole, the most liberal of the groups were the factory workers and miners, both young and old. College students, who might be expected to be liberal, were actually among the most conservative.

The most compact groups were those who are the most isolated and provincial; isolation being highly favorable to the development of social solidarity. On the other hand, the most heterogeneous groups were the social leaders, the New York City élite girls, and the Pennsylvania State College faculty. These are the intellectuals. They move about more; hence they are less stampeded by local fashions of thought. Indeed they scarcely constitute social groups at all; they are little more than aggregates of persons. The difference among the groups in variability was greatest in democracy, and next greatest in the two love-making techniques. In these the *mores* are most in a state of transition.

The approved indices of the groups were remarkably alike. In fact, this close similarity among groups in their mean rating is one of our most surprising findings, especially when contrasted with the wide scatter within each of the groups. Differential psychology has found consistently that the members of sex, racial and geographical groups differ from one another within the group much more than the mean standing of one group differs from the mean of another. But sociologists have not suspected that that same thing may be true of group modes of thought and feeling. The very foundation of sociology has tra-

ditionally been the doctrine of the solidarity of social groups. It looks as if a sociology that measures instead of speculating may find this central thesis of traditional social philosophy disproved and may be forced to accept a conclusion like that at which the psychologists have arrived. Perhaps, in this day of extreme mobility, the free interlacing of groups, and the ready matching of ideas through reading, motion picture attendance, and the radio, groups in the sociological sense have almost disappeared, and the *mores* have lost their meaning as group phenomena.

Our technique, so far as yet described, ascertained the declared approvals and disapprovals of our various groups. How do these approvals and disapprovals compare with the actual practices of these groups? Do people hold their own conduct within the limits of their approvals? Or does conduct lapse to lower levels than the members of the groups to which they belong approve? In order to get some data on this we asked a number of groups, in sealed instructions to be read only after having done the rating already described, to make a second rating. This time each respondent was asked to mark a plus opposite each act described in the scales that, according to his observation, he believed the majority of the members of "his set" would do under circumstances like those related in the paragraph, a minus opposite those he believed the majority would not do, and a question mark either if he did not know or the item did not apply to his set. A colored pencil was provided for this second rating, to distinguish it from the first.

Practice values were located by the same technique as employed in determining approval indexes. An examination of the comparisons between declared disapprovals and restraints from practice, shows that in 75% of the cases declared practices of the groups are more liberal than declared disapprovals.

Our investigation of motion pictures is based upon the hypothesis that specific patterns of conduct tend to be accepted as "the thing" to do and to become a part of the *mores,* especially when set by attractive characters.

Using this hypothesis, our problem then is this: If the patterns of conduct exemplified in motion pictures tend to get imitated, how would their acceptance affect the *mores?* In which direction from the present standards do these patterns lie? How many of them are patterns that present members of our society count an asset to have imitated, and how many a liability?

In displaying the findings regarding the amount of conflict between motion pictures and standards of morality it is necessary for us to define certain points from which to orient our data. Our basic point of orientation is what we call the "approval index" of a group. At this point the disapprovals plus half of the neutrals constitute fifty per cent of the group. The "approval index" for a group will be a point on the scale above and below which fifty per cent of the cases lie. It should be noted that of the total group approximately two-thirds will be mildly or aggressively for the bit of conduct described in the scale and one-third will be actively against it. This appears to be a reasonably exact standard to apply.

The results given are based on 142 feature films, and relate to the total, not to individual pictures. Aggressiveness of a girl in love-making is the phase of morality in which motion pictures most often conflict with present standards. Seventy per cent of all the 726 scenes listed fall below the approval index of the population constituted by all the groups combined. The percentages range from 53 in the case of the most liberal group, the adolescent sons and daughters of bituminous coal miners, to 94 in the case of the most conservative group, the middle-aged college professors and their wives. But 63% of the scenes by attractive characters lie below the approval index, while 91% of the scenes by unattractive characters lie below the same point.

It seems evident that motion pictures are opposing present standards of value in respect to aggressiveness of a girl in love-making. Some may claim that motion pictures are uniting their forces with the forces of human impulse to break down our moral code, and that it is not the function of art to parallel practice but instead to hold before us patterns of our better selves. But on the other hand the existence of the 53% of pictures that keep within the confines of the conventions of the conservative half of the population may be lamented.

The distinction made above, and to be mentioned again, between scenes enacted by characters played up through the picture as a whole in unattractive roles and those by characters played in attractive roles may be a distinction of considerable importance. There is good psychology for believing that conduct exemplified by attractive characters is likely to be imitated by observers, but that taboos are likely to be built up against modes of conduct that are shown in a disgusting light by reason of the fact that they are performed by disgusting personalities.

The findings of the study in regard to kissing and caressing are based upon 741 kissing scenes in the 142 feature films, 653 of which were by attractive characters and 88 by unattractive characters. Thirty-eight per cent of the scenes lie below the approval index of the combined groups, 35% by attractive characters and 64% by unattractive characters. The range was from 29% to 56%.

The data as a whole may be interpreted to mean that conduct in the movies in respect to kissing and caressing almost precisely parallels life, from the standpoint of both approvals and practices. It must be borne in mind that our findings have no bearing upon the propriety of showing scenes on a screen in public. Our study asked only whether the patterns of conduct were such as the people would be willing to have imitated under like conditions in life.

In our section on democratic attitudes and practices we studied only what is customarily called "social democracy." The results are based upon 613 scenes, 490 by attractive characters and 123 by unattractive roles.

If the conduct in the movies were an exact cross-section of life, the percentages of scenes below the approval index would be in every case exactly 50. The results show only a third of the scenes by attractive characters to be below the approval index of the combined groups, while more than four-fifths of those by unattractive characters fell below this point. The findings as a whole indicate that mo-

tion pictures stand rather above the *mores* in respect to democratic attitudes and practices.

The phase of our study dealing with treatment of children by parents finds the movies at their best. Five hundred and twelve scenes are included in the results, 427 by attractive characters and 75 by unattractive characters. Only 25% of the scenes lie below the approval index, 17% by attractive characters and 69% by unattractive characters.

It will be recalled that one phase of our investigation ascertained a comparison between declared disapprovals and restraints from practice. It was shown that in 75% of the cases declared practices are more liberal than declared disapprovals. Obviously if our comparisons are made against the "practice indexes" of the groups, the motion pictures will appear to better advantage.

It is only fair to point out that the "approval indexes" around which we displayed our findings may be too liberal, or even too conservative. No conclusive evidence is at hand to enable one to say that in order for a standard of conduct to be correct it should be "admired or approved" by all, two-thirds (our basic standard), one-half, or an even smaller proportion of the population. In the complete account of the study the findings are shown with regard to more and less exacting standards.

In general, then, the comparisons with the "approval indexes" showed that the movies are in marked conflict with the *mores* in respect to aggressiveness of a girl in lovemaking, that they are almost parallel with the *mores* in respect to kissing, above in regard to democracy, and distinctly above in the treatment of children by parents.

THE EDUCATIONAL MUSEUM

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FOR centuries the value of the museum as an institution for the preservation of materials depicting the progress of man and of civilization has been a well established fact throughout the countries of the civilized world. The museum as a vital force in education is of more recent origin. The value of visual aids in teaching is being more fully recognized each year, and in many school systems are practically indispensable teaching devices. From this has grown the educational museum. While all museums have a degree of educational value, the educational museum is unique in character. It is highly valuable and instructive, for the importance of displaying the materials is fully realized. An educational museum is planned from the viewpoint of the educational needs of the child and in accordance with the best educational and psychological practices. It is set up primarily for the benefit of the children and teachers within a school system, rather than for the general public.

Within the last decade, the schoolroom has been changed from an institution of words, words, words, with no concrete experiences, a place of reading and hearing without seeing, into an educational workshop. The child must learn to know and examine things for himself, become acquainted with the world in which he lives. The educational museum is an answer to this problem. Concrete examples of materials and objects with which the child would not ordinarily come in contact are presented. The objects which may be included are animals, birds, plants and minerals, as well as replicas and models of all sorts. The purpose of the museum, like any visual aids, is to vitalize teaching rather than to teach, and not to take the place of the teacher. It should improve the teaching and increase the interest of the student.

The educational museum may be set up as a separate department of the school system, as the St. Louis Educational Museum, or it may be placed in some department. The logical departments under which it may be placed are the library department or the department of visual instruction. The best arrangement is to place it under the department of visual aids with a major section devoted to the educational museum. Coöperation with the county, city, state and private museums is necessary for the most economical use of funds and collections.

In the larger cities some of the best visual materials may be obtained from large museums. In some cases a number of typical collections are sent to the schools. Others invite teachers to bring their classes to the museum for observation and instruction. Some museums have opened branches which supply schools with materials for vis-

ual instruction, as the National Museum in Washington, Field Museum in Chicago, Philadelphia Commercial Museum, Boston Museum, and Brooklyn Museum.

The outstanding type is that of St. Louis public schools which supplies all the schools of the city with visual materials for the illustration of all features of school work. The idea is not to bring the aids to the classroom for the mere purpose of showing it to the children, but for presentation, discussion, followed by the organization of the pupils' experiences leading to thought development. The museum is an integral part of the school system and a regular part of the school equipment. Exhibits are usually in glass cases under lock and key, but this is not the case with this museum. There are one hundred fifty thousand articles in twelve thousand groups and collections, arranged in boxes, cases, glass jars, and bottles ready to go to the three thousand classrooms on short notice. A schedule of delivery is adhered to throughout the system.

The arrangement and grouping of the material is in accordance with the prescribed course of study in the system. The larger groups are: food products, clothing, tree products, industrial products, articles and models illustrating the life and occupations of the different peoples of the world, the animal world (mounted, dried, and specimen in alcohol), plants (models and charts), minerals, rock and ores, apparatus for illustrating physics and physical geography, musical and literary records, charts, pictures, maps and objects of history, astronomy charts, physiology charts, art objects and models for drawing, and a classified collection of motion picture films. These groups are subdivided into smaller sections, numbered and catalogued. A museum catalogue is found on each teacher's desk, containing a brief explanation as to use, where found, references and facts. The books of references are found in the teachers' library.

One section of the museum is reserved for the display department. One or more collections of each group of materials are shown in the proper sequence. This enables the teachers to become familiar with the contents of the museum and to use it more profitably in the classroom work.

One large department is set aside for current school exhibits. The superintendent, assistant superintendent, and supervisors collect the most outstanding work from the classrooms and exhibit it in the current school exhibit section. This gives an opportunity for principals and teachers to compare their work with other teachers in other schools.

Another valuable asset to the museum is the traveling library. Sets of thirty supplementary books are sent to schools upon request. The teachers library contains all the best educational publications needed for professional study and self-culture; the catalogue of these books is found in each school.

The museum has a photographic department, consisting of a dark-room and all necessary apparatus for taking moving pictures as well as still pictures.

All collections returned from schools are unpacked, checked, and examined. Soiled and missing labels are replaced, missing articles are replaced, dam-

aged articles are sent to the repair room, glasses and boxes are cleaned, sets are repacked ready for delivery upon request. Teachers and pupils assume responsibility for the care of the collections, for there is a very small annual loss.

The staff consists of an assistant superintendent in charge of the administrative work, curator, assistant curator, office assistants, clerk, stenographer, duplicator, two librarians, photographer, repair man, checker, two packers, and two chauffeurs. The average cost per pupil is twenty-seven and one-half cents.

The Buffalo Museum of Science has a very unique department—Picture Lending Library. This started with the idea of loaning slides of natural science subjects to the public. Slides were gradually added on subjects, until the collection included slides on every phase of work, including art. A great many photographs of famous works of art, with manuscripts covering the history of art from the early cave dwellers to the modern movement, were added.

The Brooklyn Children's Museum demonstrates an effort to arouse interest and let children learn on their own terms by lectures, visiting classes through the building and after-school activities. A laboratory is provided for mineral study. Recreational activities are provided and nature courses are offered leading to medals, credits and prizes. The afternoon work is important, for it attracts children to active pastime of high educational value. There is a free loan bureau from which natural history subjects will be sent to schools, clubs, study groups and private individuals.

The operation of an educational museum by some coöperating agency of the school is found in the Philadelphia Commercial Museum. While visiting the World's Columbian Exposition in 1893, Dr. Wilson, then in charge of the Department of Biology of the University of Pennsylvania, conceived the idea that the raw and manufactured materials from foreign countries on exhibition there might be preserved and used as a basis for a museum of commercial products to stimulate foreign trade. As a result the museum was started. The work is conducted by two departments—that of exhibits and that of the foreign trade bureau. The exhibit department has charge of the collection and exhibition of products illustrating the resources of our own and other countries and the educational work The commercial library, the most complete of its kind is open to the public. The exhibits are valuable because they illustrate geography, commerce, industries and economics. The educational work is carried on to teach the rising generation the important basic facts and principles which underlie industry.

Numerous educational activities are conducted by the museum, chief of which are study of the exhibits under guidance of the museum assistants; daily lectures to visiting classes on subjects chosen by the teachers; special lectures to teachers and others; loan lectures, which consist of lantern slides and appropriate reading matter for the use of schools outside of Philadelphia, lanterns and screens go with the lectures; school collections or miniature museums which are given free to schools for classroom use.

It is interesting to note that the museum department grew in a natural and spontaneous way, as well as had its beginning by mere chance. When teachers became aware of the opportunity the exhibits afforded they wanted to bring their classes to see them. The museum authorities granted them this privilege and had the assistant curators explain the collection. So numerous were the materials, teachers and individual pupils would ask for samples to carry back to their classrooms. Whenever possible they were presented with the materials. From this came the idea of the miniature museums to be given to the schools.

After about ten years the work grew into a very definite system. A series of lectures arranged in harmony with the course of study in geography have been made. The sole effort has been to find out what the schools want and to give them that; to discover the needs of the teachers along the line of the present course of study. The lectures are followed by an inspection and study of exhibits which show the countries and industries referred to in the lecture. The class is divided into groups of about fifteen for observation. The information is up-to-date, authentic, and reliable. The work stimulates intelligent interest later in the development of a trade, increases the knowledge of raw materials and the processes of production and manufacture. The collection of films is invaluable.

Any school in Pennsylvania can obtain one of these 250 collections. Each set has several hundred specimens, containing the chief raw materials making up the world's commerce, and one hundred to two hundred photographs mounted on heavy cardboard with detailed explanations on the back. Rural schools have sets especially adapted to their needs.

Every school could have a museum, for the establishment of one is not so difficult. A great deal of material may be had from commercial firms for the asking, natural and industrial products, the United States Department of Agriculture and Forestry, National Museum in Washington, mines and quarries, merchants, friends, pupils, teachers, railroad and steamship advertisements, board of trade pamphlets, and exchange of materials with schools in different parts of the country. Since trying the museum in St. Louis from 1905 on, the principals testify that it is the strongest single influence for vitalizing instruction. Research has demonstrated the theoretical value and classroom experience has proven the practicality of the museum. The steadily increasing use of the museum over a period of years manifests a sincere belief in this method as being one of the most effective in bringing things and ideas forcefully and quickly to the minds of the children. They are no longer luxuries, but necessities for educational purposes. There are fourteen hundred in the United States, ranging from mere beginnings to large establishments Desire for investigation must always be aroused when presenting the museum materials. The aim should be to give the child a knowledge of his tools, so that he may go out with eyes, ears and fingers ready and eager to continue these investigations, stimu-

lated by a desire to know, to love and to understand. The child does his own observing, thinking and discovering, while the teacher guides and inspires. As a result of the modern rational methods of teaching and learning, the relationship between the teachers and the pupils is that of coworkers, comrades and good friends. The educational museum has been a strong factor in establishing this attitude among the teachers and pupils.

Interest, investigation, and experimentation are stimulated, instruction is clarified, pupils get correct mental images, and time is saved in the mental process. The results obtained justify the expenditure of all the money that has been appropriated for the museum. Too much cannot be said for the value of the educational museum. Sound psychological and practical bases have been established by research and use in the classroom.

VISUAL AIDS IN SCOUTING

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SCARBOROUGH, NEW YORK

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As originated by Lord Baden-Powell, the boy scout program was built around keen observation and interpretation of the things seen. From the first night that a prospective boy scout goes to the meeting of his neighborhood scout troop and is intrigued by the sight of the scoutmaster tying useful knots with a bit of rope, his training consists of seeing and doing rather than the study of the printed page or listening to a lecture.

From the inception of the movement scout leaders have agreed that the best scouting is practiced in the field. There the scout may see for himself. Action rather than theory, practice rather than precept, is the scout leader's rule. To *learn by doing* is an axiom of scouting.

The best scoutmasters make indoor activities a preparation for the outdoor hike or camp. The model fire, laid in miniature on the floor of the troop meeting room, is later built in full size reality on the floor of the forest. Likewise the signals sent from one end of the hall to the other are given new meaning as they are wigwagged from hilltop to hilltop along the hike. The camping scene dramatized at the indoor session, is realized in fact when the troop reaches its evening's camp site.

* * *

One Saturday morning the principal of the Roosevelt Junior High accepted the invitation of his scoutmaster friend to accompany him and his troop to their camp on a nearby river. The setting seemed at once very familiar to the school man though he had never before visited the spot. Suddenly it flashed upon him that here was simply a transplanted class in an outdoor classroom and that the scoutmaster was really a teacher.

The scouter-teacher though, had the distinct advantage of teaching that

which the boys very much wanted to learn and practice, and of teaching in natural surroundings and in a natural social group, he concluded.

Educators will recognize several familiar methods of instruction in the kit bag of the scout leader. Among them are the use of pictures, demonstration, dramatization, collection and exhibition. All are inextricably a part of the field trip method of studying and experiencing the real rather than substitutes, and all are visual aids to education, being based on keen observation and interpretation.

It has been said that pictures are windows to the mind. Truly they are the next best to actually seeing the original. They have special value in the scouting nature study program, where they enable the boy to make his first identification of the subject or specimen. Among thousands of illustrations, the scout's *Handbook for Boys* includes pictorial charts of one hundred twenty-six varieties of North American trees. Armed with his handbook alone, the scout in any part of the United States should be able to identify any tree that he may encounter on his hike. But the pictures serve only for identification. To know the name of the tree is the least that can be known about it. Having identified the tree, additional knowledge about its habitat, its variations, and perhaps its uses, can then be readily developed.

In a Nebraska camp the writer saw a unique method of using pictures in the instruction in methods of laying fires. A little before dinner time the instructor handed pictures of special types of fires to the leaders of the five patrols. He told them to lay the fires according to the illustrations, from the materials at hand, and to tell him when they were ready to light them. After much consultation and gathering of twigs and branches, the fires were prepared. Then the whole troop gathered, first by one fire and then by the next, while a selected member of each patrol demonstrated the building and purpose of their particular fire. Later dinners were cooked over the fires, and the stories told by the pictures had become reality.

Demonstration plays almost as large a part in the scout leader's instruction methods today as it did back in the days of the savage who first showed his son how to bring fire from his fire drill. Much of the information and most of the skills of scouting are demonstrated by the scoutmaster or other leader before they are practiced by the scouts.

There was the evening that the new patrol hungrily watched the young eagle scout spit alternating slices of steak and onion on a slender peeled branch, as he prepared to cook his kabob. He told them with a meaningful grin to pay close attention, for upon their ability to repeat his demonstration depended their own suppers. "There's just enough food for all, but no extras."

Intently they observed how the fire was allowed to die to a heap of glowing coals and how the spindle of cooking meat and vegetable was carefully revolved over them. Urged by every savory scent that reached their nostrils they wached the testing of the meat and when all was thoroughly done they saw how slice after slice could be slipped off and eaten from the stick while the rest was kept hot. Either

the demonstration was well done or the learners were especially alert, for every boy's kabob was eaten to the last morsel.

The teaching of first aid to the injured is an important phase of boy scout training, and since it is entirely a matter of *doing* something to an injured person, its principles must be well demonstrated in the course of instruction. The wise leader will tie his demonstration to a situation familiar to the boy.

It was a nasty wintry night as Scout Bill Smith made his way to the neighborhood church. When, later in the evening, his patrol gathered in a corner of the parish house to practice first aid, the instructor shot the question: "Bill, did you notice how slippery it is tonight? What if you were walking with a friend and he slipped and fell breaking his right forearm? what would you do?" When Bill was slow in answering, his instructor asked for the handkerchiefs of a couple of the scouts, and with them improvised a serviceable sling, which he demonstrated on the arm of one of the group.

The story of these methods of scouting instruction would not be complete unless mention was made of the merit badge program leading to the higher scout ranks. With the increasing number of older and advanced scouts in the movement this phase of the program is becoming more and more important.

After the scout has worked up through the ranks of tenderfoot, second and first class scout, he may continue to advance through a specialization in a large field of elective subjects designated as merit badge subjects. From first class scout he may become a star, then a life, and finally an eagle scout. Achievement in twenty-one different merit badge subjects plus a record of good behavior and service according to scouting standards are required for this highest award. It is safe to say that demonstration is the teaching method most used by the counsellors who coach in these electives.

The merit badge subjects embrace most of the arts and crafts and some of the trades and professions practiced in this country. They range from agriculture and angling through over one hundred thirty subjects to woodworking and zoology at the end of the list. In most instances, the counsellor takes the scout into his store, shop, laboratory, barn or field, and there shows and tells the lad of what is involved in that particular subject.

The counsellor in printing, for instance, will take the scout into his print shop, where he will pull out a case of type and show the lad how to compose a form. Then the form will be locked into the press and the job will be run off. Often the amateur typographer is allowed to run off a simple commercial job under the eye of the master printer. Of course the better counsellors will go on from this demonstration of technique to tell the possibilities of printing as a vocation.

An attractive pamphlet has been prepared for each of the merit badge subjects by experts in their respective fields, and while the scout may get a part of his information from the pamphlet, practical coaching with the counsellor is counted upon to complete the information. Many instances have been noted where this vocational exploration has led to permanent hob-

bies and in some cases to selection of life occupations.

From the earliest times, when the women and children squatted around the camp-fire circle while the warriors of the tribe enacted the drama of the hunt, dramatization has been a most important method of instruction. The young Indian boy played at hunting in most realistic fashion, and today his white brother may be taught to meet many of life's problems through the medium of dramatization.

For example: Troop One was camped for the week-end on an ox-bow of the Cheyenne River, where good bathing was afforded. Young Hopkins was a tenderfoot recruit who was anxious to learn to swim, and on the first afternoon his eagerness took him beyond his depth and he called for help as he sank in the deeper water.

On the bank, a few yards away, stood the watchful young scoutmaster, and as he saw the lad's plight there flashed through his mind the thought that this was the same scene that they had rehearsed so many times in the school gym, where they held their troop meetings. This was no rehearsal, he realized grimly.

Nearest the drowning boy was John, the doctor's son, who was older and a good swimmer. "Get him, John!" called the leader, as he poised ready to dive in himself if need be. He did not have to go in, however, for with a neat surface dive, John got hold of young Hopkins and with a few strokes was where he could touch bottom and bring the now unconscious lad to shore for resuscitation.

The boys' excitement was high, but they worked methodically under the calm, quick instructions of their leader and soon their comrade was revived. The real production had gone off just as smoothly as had the dress rehearsals.

Dramatization as a substitute for the written examination is much used by scout leaders. Often this is done by introducing the element of competition between the patrols of the troop or between teams which may be formed for the occasion.

In first aid, for instance, sets of slips are prepared which indicate the nature of the injury, as, face pale, flowing in spurts, etc. These are put in place about the victims, one of which has been laid out for each patrol or team. At the signal the teams all go to work simultaneously under the critical eyes of the judges.

Such a contest not only provides the thrill of competition, but the imagination of the boy adds the stimulus of reality. Meanwhile the scoutmaster has had an opportunity to judge the skill and knowledge of the individuals and the teams.

We have already observed that a beginning of the knowledge of birds and trees may be had from pictures. Similarly, but more effectively, the study of exhibitions may be a very great aid to instruction.

The first exhibit that a candidate for scouthood sees is the knot board of the type on display in nearly every troop headquarters. Sometimes there are many of them, with their knots mounted on anything from cardboard to an elaborate display on a polished hardwood plaque. Later, as the boy works toward his first class rank, he will doubtless inspect collections of tree leaves, plants, etc., made by the older members of his troop. From

these exhibitions he may be encouraged to make collections of his own as one of the projects in gaining the knowledge he should have to be at home in the fields and forests.

Many scout troops have small museums, which have been gradually built up by the boys of the troop. Summer camps of scout councils often have quite elaborate museums under the supervision of an undergraduate or professional teacher. One rural New York council was given such a camp nature study center completely equipped even to its dark-room for the amateur photographer. Other councils have smaller nature dens scattered in the various divisions of the camp. These dens are simply tables and shelves set up under a tent or fly and are in charge of a leader who had been trained by the camp nature counsellor.

Most boy scout camps and private camps also have plenty of illustrated books and photographs as visual aids to nature study. Some have stereoscopes, a few have stereopticons and less have moving picture projectors. Where these last are found they are invariably for entertainment rather than for instruction. Trained leaders usually limit the use of these visual aids to approach the study of real life about them.

More important than scouting skills and knowledge are the attitudes toward life and the traits of personality and character that every leader of youth demonstrates.

Take the time that the troop was out on an overnight hike and it began to rain a little after midnight, and they had gone to bed under a clear sky. No tent had been put up, just a large square of old canvas had been laid on the grass for a ground cloth. It was a trial to test the spirit of any leader, for some of the lads were just youngsters out on their first camping trip and were ready to burst into tears.

A long time after that the scoutmaster heard a boy's story of what happened that night. "When that rain drenched us, I remember that some of the kids wanted to start for home right away; but I shall never forget how you had some of us build up the fire, while you and the rest made a big lean-to out of that piece of canvas we had been sleeping on. Under that shelter we huddled out of the rain, while right in front of it you kept the fire blazing. Then you began to tell us stories and we forgot the rain. In the warm glow from the fire we all went to sleep again. You just wouldn't let us get downhearted."

Yes, a leader's actions often speak so loudly that his young followers can not hear what he has to say. Character is most surely developed through association in camp, rather than by many repetitions of precept, valuable though that may be.

It is evident that visual-sensory aids to instruction play a large part in the scouting program. Whether it be making fire by friction, reviving an unconscious person, or lending a helping hand to a neighbor in need, the youngster has been trained through seeing and doing.

DEPARTMENT OF BOOK REVIEWS

The Educational Talking Picture. By *Frederick L. Devereux* and others. 222 pages. Published by The University of Chicago Press, Chicago, 1933. $2.00.

One of the most notable visual instruction programs recently developed is that of the University of Chicago. Working in collaboration with Erpi Picture Consultants, Inc., it has gone into the production of a series of science talking motion pictures to be used in undergraduate courses. A number of the films have been finished and we are informed that a report on their effectiveness and use is soon to appear based on the experience gained to date in the classrooms of the university.

As a forerunner to what we expect will be further reports, it is fitting that a treatise dealing with the production and use of educational moving pictures should appear from the University of Chicago Press. The book coming from the executive staff of one of the leading producers of talking motion pictures in collaboration with well-known educators therefore commands attention as it represents the product of cooperative work and planning between school men and industry. Furthermore, it is the first authoritative book in the field of the talking motion picture as applied to education that has appeared in the United States.

The purpose of the book is "to present preliminary solutions of some of the more important problems encountered in adapting the talking picture to the service of education. The first six chapters deal with the development of fundamental bases of production, with the experimentation which has been conducted, and with suggested problems for future research. The remaining chapters are devoted to the practical problems involved in utilizing the film effectively in educational programs." (P. vii.)

Colonel Frederick L. Devereux's book reflects the point of view of the planning engineer. It is informative to laymen and professional workers as well. That the talking motion picture is to be a vital force in education is not to be doubted. This book blazes the trail in a new field of educational thought, guidance and action.—F. D. McC.

Motion Pictures in the United States. By *Cline M. Koon* and others. Pp. 106 + XV. Published by the University of Chicago Press, Chicago, 1934.

The United States has, for a number of years, failed to be officially represented at the meetings of the International Educational Cinematographic Institute held from time to time in Rome. This year in response to a request of the director of the Institute, Dr. Luciano de Feo, the United States Office of Education through the person of Dr. Cline M. Koon prepared a report on the instructional use and indirect educational influence of the motion picture in the United States. The report was presented at the Congress of Educational and Instructional Cinematography which was held in Rome, Italy, during April, 1934. An official delegation from the United States also attended the Institute.

In keeping with its interest in visual instruction the University of Chicago Press has published Dr. Koon's report in the form of a monograph. This book like *The Educational Talking Picture* is a cooperative effort. It opens with a foreword by Dr. George F. Zook, United States Commissioner of Education, who writes of the power of the motion picture as follows: "The possibilities of the motion picture in international understanding are limited only by the ingenuity of man. It speaks to the learned and the unlearned. . . . Its universal emotional appeal and common language, its geographical spread and commercial interests, its financial power and propaganda possibilities make it one of the strongest and subtlest integrating influences in

human history. . . . In the field of formal education our rapidly changing social order has greatly complicated the educational process. The learner must master and co-ordinate a bewildering number of facts. He must explore almost unbounded realms. The teacher needs the aid of science in this age which science has done so much to make complex. Potentially, the motion picture is one of the chief contributions of science to education—if not the chief—but it is not being fully utilized." (Pp. V-VI.)

As planned by Dr. Koon the report is divided into nine units: (1) the educational influence of motion pictures; (2) the motion picture in the service of health and social hygiene; (3) the motion picture in governmental service and patriotism; (4) the use of motion pictures in vocational education; (5) the motion picture in international understanding; (6) motion-picture legislation; (7) the technique of making and displaying motion pictures; (8) the systematic introduction of motion pictures in teaching; and (9) educational problems of a general nature resulting from the introduction of motion pictures in teaching. (P. XI.)

It will be seen from the foregoing outline that it is on the side of comprehensiveness that this survey differs from others that have been made in the past. Hence it is a distinct contribution to the literature of visual instruction. It would be of value if such a report from the United States Office of Education could be made an annual or biannual affair. Let us hope that our official connection with the International Educational Cinematographic Institute is continued and that it is as productive in the future as it has been in this first venture.—F. D. McC.

A Handbook of Visual Instruction. By *Ellsworth C. Dent.* 108 pages. Published by Brigham Young University, Provo, Utah, 1934.

This monograph is intended to be as its title indicates, a handbook for teachers and workers in the field of visual instruction. It is compactly written so as to provide a useful manual at moderate cost. One of the major difficulties that has obtained in the field of visual instruction has been the scattered nature of authentic information about sources, materials and equipment. Professor Dent's handbook has been written to fill this need.

In addition to a list of sources of information and materials, the monograph contains a rapid survey of the status, use and meaning of visual education. The largest section of the book is devoted to a description of the types of visual aids and their specific uses in instruction. This section which contains fifty sub-divisions is one of the most, if not the most, comprehensive discussion of types of visual aids which the reviewer has seen in print. It alone would justify the publication of the handbook.

This publication is a valuable source book and should prove to be a worthwhile supplement to the texts now available in the field of visual education. It is planned to revise the handbook every two years. If this plan is carried out, Dent's Handbook of Visual Instruction should become the standard reference book in visual education.—F. D. McC.

The Cuthbertson Verb Wheels. By *Stuart and Lulu L. Cuthbertson.* Boulder: University of Colorado, Extension Division, 1933. 35 cents (25% off for 25 or more).

Teachers who believe that the repeated writing of a correct form serves to fix it in the mind of a student, will be interested in a device called "The Cuthbertson Verb Wheels." If the student knows the name of the form he wishes to use, i. e. present subjunctive active third person singular or present active participle, he can by twirling the superimposed white circle until the arrow points to the proper verb in the margin, make the proper form appear in the openings under the headings. He will then have the correct forms before his eyes and will write them correctly instead of trusting to a memory too often faulty. The whole device is not unlike the bridge-scorers which do all your reckoning for you. These verb wheels, however, require considerably more intelligence to operate them. They do not eliminate the need for knowledge on the part of the student, but rather enable him to make use of his own knowledge and offer him in compact and correct form the information usually contained in several pages of a Latin grammar. Even the irregular Latin verbs like *eo, flo, licet* and *sum*, are taken care of by a key on the back of the wheel. In addition, we find on the back of the larger cream-colored circle the principal parts of eighty-five Latin verbs w'th their English meanings. The wheels are also available for Spanish, French and German verbs.

The originator says that the wheels may be made the basis for games of different kinds. Such games serve the purpose of painless drill on verb forms.

Certainly students who do not carry in their heads conjugations for the writing of Latin, French, Spanish, or German sentences may find the correct forms with a minimum of effort by the use of these wheels.—CALLA A. GUYLES, University of Wisconsin High School.

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History of Secondary Education in Pennsylvania. By *James Mulhern.* Published by the author, University of Pennsylvania, Philadelphia, 1933.

This book is a high credit to its author. It involved a prodigious amount of research in all kinds of sources. This is clearly indicated by a bibliography of 74 pages, with careful and full documentation throughout the book. The history of all education in all America is indebted to Mr. Mulhern for his achievement.

The history of secondary education in the United States has long lacked serious and detailed discussion. Especially has the Academy wanted a thorough historian. Mulhern has for one of the states contributed a volume that satisfies the local needs, and helps to gain a proper appreciation of the need for a truly national history of secondary education.

This history is comprehensive, even encyclopaedic. Its more than 600 pages will please the special scholar in the history of education, but may repel the general reader. It would be a service to his own state if the author would make a digest of the book for the use of teachers, school officers, and teacher-training institutions. Much of the documentation could be omitted, since it is given in this volume, and the wealth of detail could be reduced to manageable limits.

The book should be in every education library and students in the history of education may refer to it frequently with profit, not only for its information but for its method. The loss of interest in and of power of the subject of the history of education in the equipment of teachers and school executives will be checked by scholarly books of this sort.—ARTHUR H. WILDE, Boston University School of Education.

The English of Business. By *Hubert A. Hagar, Lillian Grissom Wilson* and *E. Lillian Hutchinson.* Parts one and two. 228 pp., cloth. 1934. The Gregg Publishing Company.

English Literature. Edited by *Thomas H. Briggs*, Professor of Education, Teachers College, Columbia University; *Max J. Herzberg*, Principal of Weequahic High School, Newark, N. J., and *Emma Miller Bolenius.* 1934. 770 pp., cloth. $2.12.

NEW EDUCATIONAL BOOKS

We acknowledge receipt of the following publications of interest to the readers of EDUCATION. Mention here does not preclude review in this or subsequent numbers of EDUCATION.

Supervisory Guidance of Teachers in Secondary Schools. By *Ellsworth Collings*, Dean of the College of Education, Professor of School Supervision, University of Oklahoma. 1934. 613 pp., cloth. $2.50. The Macmillan Company.

Beginnings in the Old World. By *Charles A. Coulomb*, Assistant Superintendent of Schools, Philadelphia, Pa., *Emma Dowling*, Supervisor of Primary Grades and Kindergartens, Reading, Pa., and *Anna A. Rapp*, Supervisor of Intermediate Grades, Reading, Pa. 1934. 279 pp., cloth, illustrated. 96c. The Macmillan Company.

World Backgrounds. By *Charles A. Coulomb*, Assistant Superintendent of Schools, Philadelphia, Pa. 1934. 552 pp., cloth, illustrated. $1.48. The Macmillan Company.

A First Course in Algebra. By *N. J. Lennes*. 1934. 456 pp., cloth. $1.36. The Macmillan Company.

Founders and Leaders of Connecticut, 1633-1783. Edited by *Charles Edward Perry*, Department of History, Hartford Public High School. 1934. 330 pp., cloth, illustrated. $1.60. D. C. Heath & Company.

This Changing World. By *Samuel Ralph Powers*, Professor of Natural Sciences, Teachers College, Columbia University, *Elsie Flint Neuner*, Supervisor of Elementary Science, New Rochelle, N. Y., and *Herbert Bascom Bruner*, Professor of Education, Teachers College, Columbia University. 1934. 575 pp., cloth, illustrated. $1.40. Ginn and Company.

Can Attitudes Be Taught? By *Arthur Lichtenstein, Ph. D.* 89 pp., paper. 1934. $1.25. The Johns Hopkins Press.

Directed High School History Study. Book Three. The United States of America. By *Alice Magenis, A. M.*, Southside High School, Elmira, N. Y. 1934. 202 pp., workbook. 84c. World Book Company.

Work-Test Book to Accompany Biology and Human Welfare. By *James Edward Peabody*, recently Head of the Department of Biology, Morris High School, New York City. 1934. 158 pp., paper. 40c. The Macmillan Company.

A Unit Workbook in Plane Geometry. By *F. Eugene Seymour*, Supervisor of Mathematics, New York State Department of Education, and *Hallie S. Poole*, Lafayette High School, Buffalo, N. Y. 1934. 126 pp., paper. 40c. The Macmillan Company.

The Copyreader's Workshop. A Textbook for the School Newspaper, with Graded Assignments in Editing Copy, Building Headlines, Proofreading and Make-up. By *H. F. Harrington*, Director of the Medill School of Journalism of Northwestern University, and *R. E. Wolseley*, formerly Lecturer in Newspaper Editing and Make-up at Mundelein College and Teacher of News Editing and Writing at Englewood Evening High School, Chicago. 1934. 341 pp., paper. $1.32. D. C. Heath & Company.

A Review of Essentials of Grammar and Composition. By *Elma Holloway, B. L., A. M.*, and *Edna F. Goodhew, A. B., A. M.*, Instructors in English, Pasadena Junior College. 1934. 156 pp., cloth. $1.00. Prentice-Hall, Inc.

Human Values in Music Education. By *James L. Mursell*, Professor of Education, Lawrence College, Appleton, Wisconsin. 1934. 388 pp., cloth, $2.40 list. Silver Burdett & Company.

The Arithmetic of Business. By *Frank J. McMackin*, Principal, William L. Dickinson High School, Jersey City; *John A. Marsh*, Head of the Mathematics Department, High School of Commerce, Boston; and *Charles E. Baten*, Instructor in the Commercial Department, The Lewis and Clark High School, Spokane. 1934. 486 pp., cloth, illustrated. $1.48. Ginn and Company.

The following have all been received from the Bureau of Publications, Teachers College, Columbia University:

Spend Your Time. New York's Resources for the Use of Leisure. Compiled by The Parent-Teacher Association, Lincoln School of Teachers College, Columbia University. 74 pp., cloth.

The Measurement of Bilingual Background. By *Moses N. H. Hoffman, Ph.D.* 75 pp., cloth. $1.50.

The Relationship Between Item Validity and Test Validity. By *Max Smith, Ph.D.* Cloth. $1.50.

Effect of Immediate and Delayed Praise Upon Learning and Recall. By *Benjamin Brenner, Ph.D.* Cloth. $1.50.

Centralizing Tendencies in the Administration of Public Education. By *George Drayton Strayer, Jr.* Cloth. $1.50.

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Equipment Specifications for High Schools: Their Use and Improvement. By *Ray Eugene Cheney, Ph.D.* Cloth. $1.50.

The Stated Aims and Purposes of the Department of Military Science and Tactics, and Physical Education in the Land-Grant Colleges of the United States. By *Willard L. Nash, Ph.D.* Cloth. $1.50.

Organization and Administration of Substitute-Teaching Service in City School Systems. By *Clare Charles Baldwin, Ph.D.* Cloth. $1.50.

The Relations Between Scholastic Achievement in a School of Social Work and Six Factors in Student's Background. By *Thornton A. Merriam, Ph.D.* Cloth. $1.50.

A Study of Verbal Accompaniments to Educational Motion Pictures. By *Leon H. Westfall, Ph.D.* Cloth. $1.50.

The Professional Treatment of the Subject Matter of Arithmetic for Teacher-Training Institutions. By *Elias A. Bond, Ph.D.* Cloth. $2.50.

The Evolution of the Negro College. By *Dwight Oliver Wendell Holmes, Ph.D.* Cloth. $2.25.

An Experimental Study of the Effect of the Use of the Typewriter on Beginning Reading. By *Cecilia E. Unzicker, Ph.D.* Cloth. $1.50.

Indefinite Teacher Tenure. By *Winfield Scott*, Ph.D. Cloth. $1.75.

The Initiation of an Activity Into a Public School. By *Fay Adams*, Ph.D. 1934. 80 pp., cloth. $1.50.

The Internal Administration of the Liberal Arts College. By *James S. Kinder*, Ph.D. 1934. 160 pp., cloth, $1.50.

Methods of Education in International Attitudes. By *B. M. Cherrington*, Ph.D. 1934. 123 pp., cloth, $1.50.

Health Education for Teachers. By *Mary E. Spencer*, Ph.D. 1934. 118 pp., cloth, $1.50.

Some Code Controls of School Building Construction in American Cities. By *John W. Sahlstrom*, Ph.D. 1933. 153 pp., cloth, $1.50.